

The HECA Research Conference 2025: 'Thriving in the Digital Age: AI, Education and Wellbeing for a Resilient Ireland'

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The Higher Education Colleges Association (HECA) Research Conference 2025, hosted at Dublin Business School, brought together presidents, academics, students, policy leaders and industry partners from across Ireland's independent and private higher education sector for two days defined by connection, critical reflection and research excellence. The conference opened the previous day with a workshop focused on the theme '*Unlocking research potential: building collaboration for impact*'. Led by our keynote speaker for the following day, Dr Tom Farrelly of Munster Technological University (MTU), the session provided an opportunity to explore and develop responses to the key challenges facing HECA research in the years ahead. The overall conference highlighted the sector's growing research culture and reinforced the important role HECA institutions play in Ireland's wider knowledge landscape. Our MC, Dr Kelly Hunnings, opened the day's programme by introducing Tim Bicknell, President of Dublin Business School, who welcomed delegates and set a warm, collegial tone for the day. This was followed by an address from Dr Marcella Finnerty, Chair of HECA, who spoke about the continued growth of research capacity across independent and private higher education and the sector's shared commitment to supporting both staff and student researchers.

Keynote Address

One of the most memorable moments of the day was the keynote delivered by Dr Farrelly, who offered a compelling and thought-provoking exploration of how generative artificial intelligence is reshaping research and academic practice. In his talk, '*Beyond the Algorithm: Redefining Research in the Age of Generative AI*', he examined the rapid growth of AI, the shifting nature of scientific inquiry, and the need for researchers to protect human creativity, judgement and critical thinking in an age of automation. This talk was provocative and challenging to both boosters and critics of AI. His keynote resonated strongly with attendees and provided a powerful framework for the conversations that followed.

Technology and AI

The first morning session in the main room saw a wide variety of technology-focused presentations from across the HECA partners by both staff and students. The first two shared an interest in health data science, as Abhishek Krishna Pillai explored advanced EEG analysis through machine learning and John Lenehan probed microlearning and nursing education. The next three presentations delved deeply into computer networks with Dr Alexander Victor and Antonio Felipe Cora Martins, while Aswin Kumar Vyomakesan interrogated machine learning and AI potential in land

valuation. All-in-all, this was a wide exploration of the depth of computing research across our colleges.

Business and Sustainability

The presentations in this session explored the interplay between policy, technology, and organizational practice in driving sustainability, innovation, and efficiency across sectors. Jeanette Garcia Kola explored the question of whether or not Ireland's climate policies align with its position as a neutral donor. Through data analysis she hopes to fully answer the question in her ongoing research. Viridiana Monserrat's enlightening talk explored how company culture influences the handling of failure and the use of open innovation, and the specific challenges for small and medium sized companies. Norma Sanchez Morlaes discussed blockchain technology adoption at the product design stage, assessing how the technology could improve compliance, efficiency, and trust in new food product development at DigiFoods. She highlighted the usefulness of the Chroma model to assess company readiness to adopt blockchain technology. Xu Han's research looked at how the U.S. Nitrogen Oxides (NOx) Budget Trading Program affected companies' exposure to commodity price risks and their use of financial risk management tools, ultimately highlighting its success as evidenced by the data. Anesu Nyabadza discussed his project relating to sodium-ion batteries and the development of an AI system to assess quality on production lines. The research outcomes indicated that AI could manage all the steps in quality control workflow. This was an excellent session with a great diversity in terms of the themes and studies presented. The impressive quality of the research and the clarity with which the findings were communicated by all of the speakers were also at a very high level.

Education and Well-being

Greg Christodoulou's presentation on systemic failures in recording Affected Family Members in Ireland's addiction treatment was a powerful case for reform of our system. It made a very strong case that we undercount the recording of the harms caused by addictions (even excluding problem gambling, which does not have the same reporting requirements as substance abuse). The work presented could be expanded on in future outputs to allow the impressive detail of Greg's work to continue. Dr Andrew Wall compared the challenge of AI in learning, education and society to Plato's critique of Socrates' assertion that writing weakened reason. He argued that such transformation as seems inevitable needs to be wielded consciously, critically and ethically, being mindful of goals as Freire counsels, using Socratic dialogue to sharpen students' critical skills.

One of the joys of a multidisciplinary conference such as this is being confronted with worlds outside your experience, and Susan O'Brien's description of the burnout stress and burnout in clergy in Ireland generated a high level of empathy among attendees. Susan described how increasing burdens, including mental health care, declining public support, larger areas to serve, and fewer clergy created a familiar neoliberal cycle. Martin Nunan presented a strengths-based approach to positive reframing in the context of counselling supports for individuals who were experiencing anxiety and negative self-talk. His research compared two intervention groups - one group of students who received psychoeducation around positive reframing and one that did not - and found that the overall levels of anxiety and low mood were decreased for the reframing-trained students. A lively and engaged Q&A again could have run on for much longer but we had to return to the main room.

Panel Discussion



As part of the Conference theme, 'Thriving in the Digital Age: AI, Education and Wellbeing for a Resilient Ireland', the panel discussion, chaired by Dr Linda Butler Neff, focused on national policy, sectoral leadership, industry perspectives, and the student voice in shaping a coherent, future-ready research identity for HECA higher

education institutions. The discussion emphasised the importance of prioritising innovative research ecologies, alongside the need to develop strong, symbiotic relationships across HECA partners. Particular attention was given to extending these collaborations to students through collegial communication, shared support, and collective engagement in research among HECA partners.

The panel comprised William Beausang, Assistant Secretary, Research and Innovation Division, Department of Further and Higher Education, Research, Innovation and Science (DFHERIS); Dr Marcella Finnerty, HECA Chair and President Emeritus, IICP College; Dr Tom Farrelly, Munster Technological University (MTU); Hugh Sullivan, Director, Crowe Consultancy; Dr Julie Uí Choistealbha, Registrar, Hibernia College; Jeanette Garcia Kola, Griffith College Research Hub; and Kyle Quinn, Student Representative, Griffith College.

HECA Student Research Awards (HSRA)

The HECA Student Research Awards (HSRA) recognise excellence in student-led research across HECA member institutions, celebrating originality, methodological rigour, and applied impact across disciplines. The HSRA winners exemplified the conference theme, through research that was both academically robust and socially relevant.

This year's award recipients demonstrated a strong capacity to engage critically with complex contemporary challenges, including digital transformation, sustainability, wellbeing, and ethical innovation. Their work reflected a high standard of scholarly inquiry, combining theoretical grounding with empirical analysis and, in many cases, clear implications for policy, professional practice, and future research. Across diverse fields, the winning projects highlighted the central role of student research in advancing knowledge that responds to national and global priorities.

This breadth and quality were further evident in the top three awards, which recognised applied research from Rachel Purcell from Griffith College and Innopharma Education on anatomical modelling for medical device design; Hamza Razaq from Dublin Business School examining the integration of artificial intelligence in mental health practice; and a collaborative project from Ignacio Alarcon Varela and Bernardo Gandara of CCT College addressing digital trust through deep-learning methods for distinguishing synthetic from real images. Collectively, these projects illustrate the capacity of student researchers within HECA institutions to contribute meaningfully to innovation, professional practice, and emerging societal needs.

The awards underscore HECA's commitment to fostering a vibrant research culture that actively includes students as emerging scholars and collaborators. By providing

a national platform for dissemination and recognition, the HSRA continues to support the development of research capacity within HECA institutions and to affirm the value of student contributions to Ireland's evolving research ecosystem.

Further details and the full list of winners, recommended submissions, and the posters themselves are available on the HECA website: <https://heca.ie/fifth-annual-heca-student-research-awards/>

Student Well-being

The first afternoon session in the main room seemed to be the perfect exploration of issues core to staff across HECA colleges: student well-being. It opened with Dr Chris Gibbons exploring how students can go beyond just getting their marks and actually begin thriving. Arturo Vasquez Zepeda followed up with a thrilling discussion on how we can connect better to our students in the current digital upheaval. Arturo hit on the theme of empathy, which Caroline Bennis then followed up on in a scintillating discussion around empathy as a taught skill. The value of these discussions came to life again in the Q&A period as student well-being was discussed at length. The importance of these presentations and value of the subject matter shone through the discussions.

Technology, AI and Education

This afternoon session brought together researchers and practitioners from several disciplines, whose presentations showcased diverse perspectives on the growing presence of AI - particularly generative AI (genAI) - and machine learning (ML) in the research landscape. The capabilities, challenges and implications of the use of genAI and large language models (LLMs) in education were considered and discussed in the contexts of sustainable library support for genAI tool use (Trevor Haugh, Niamh McHenry, Amy Hayes and David Rinehart), creating multimedia educational resources using genAI tools (Nilay Udeshi), the challenges of genAI use for academic integrity in assessment (Dr Muhammad Iqbal), and the potentially deleterious impact of genAI upon scholarship and academia (Rob McKenna). The perspective of applied research, meanwhile, was ably represented by student projects on predictive models for monitoring weather anomalies (Fiona Behan) and coastal erosion (Manjula Vijayaraghavan), both of which demonstrated the potential of AI and ML as valuable tools for conducting environmental research. Discussion among participants and attendees in the Q&A session showed wide consensus on the need for an informed,

critical approach in our engagement with AI tools, while acknowledging the benefits that this technology can bring to research work.

Final thoughts

After four years, the HECA Research Conference has established itself as a significant platform for showcasing the breadth and quality of research across our institutions. It has also become a dynamic forum for generating ideas, strengthening partnerships, and advancing meaningful collaboration. The HECA Research Committee and Library Committee now look ahead with confidence and ambition to HECA 2026!