

Naughton Family Chair in STEM Education for Primary and Early Childhood Education

School of STEM Education, Innovation & Global Studies

DCU Institute of Education

Dublin City University

Permanent Contract

Dublin City University <u>www.DCU.ie</u> is a young, ambitious and vibrant University, with a mission 'to transform lives and societies through education, research, innovation and engagement'. Known as Ireland's 'University of Enterprise and Transformation', it is committed to the development of talent, and the discovery and translation of knowledge that advances society and the economy. DCU is the Sunday Times Irish University of the Year 2021.

The University is based on three academic campuses in the Glasnevin-Drumcondra region of north Dublin. It currently has more than 18,000 students enrolled across five faculties – Science and Health, DCU Business School, Computing and Engineering, Humanities and Social Sciences and DCU Institute of Education. DCU is committed to excellence across all its activities. This is demonstrated by its world-class research initiatives, its cutting-edge approach to teaching and learning, its focus on creating a transformative student experience, and its positive social and economic impact. This exceptional commitment on the part of its staff and students has led to DCU's ranking among the top 2% of universities globally. It also consistently features in the world's Top 100 Young Universities (currently in QS Top 70 Under 50, Times Higher Top 150 Under 100).

DCU is placed 84th in the world, in the Times Higher Education University Impact Rankings – measuring higher education institutions' contributions towards the UN Sustainable Development Goals. Over the past decade, DCU has also been the leading Irish university in the area of technology transfer, as reflected by licensing of intellectual property.

The Naughton Foundation

The Naughton Foundation was established by Martin and Carmel Naughton in 1994. It is a private family foundation <u>www.thenaughtonfoundation.com</u> and its goal is to support worthwhile causes in the arts and education. In announcing this new Chair, the first of its kind in Ireland, Martin Naughton said "we believe it will ensure that the excitement of science and technology will be carried into our classrooms and will inspire the next generation of STEM leaders for Ireland and beyond."

DCU Institute of Education

The DCU Institute of Education is the newest faculty of Dublin City University. It is based in a \notin 70 million purpose built facility on the DCU St Patrick's Campus in Drumcondra in Dublin. Established in 2016 as Ireland's first University faculty of Education, it has a staff of more than 140 full-time academics and a student body in excess of 4,000. The Institute brings together students of education across all sectors from early childhood, to primary and post-primary and further and higher education. As well as providing a range of undergraduate programmes in education, the Institute offers a rich menu of taught and research-based post-graduate programmes, at doctoral, masters, diploma and certificate levels. As a centre of expertise and excellence in teacher education and education more generally, the Institute hosts a range of research centres in key areas of priority and has an ambitious and growing programme of research.

With internationally-recognised experts in education policy, inclusive and special education, curriculum and pedagogy, assessment, literacy, evaluation and teacher education, the Institute provides a dynamic learning and working environment. Staff can expect to encounter opportunities for multi-disciplinary work, not just in the Institute, but across the University. As one of the world's leading young Universities, DCU has established its fifth and newest faculty out of a conviction that studies and research in education and the preparation and support of teachers are central to the transformation of lives and communities. Committed to academic excellence and innovation, the DCU Institute of Education is confident its students and staff, and its graduates can flourish and lead in the challenging and complex contexts of 21st century education.

The School of STEM Education, Innovation and Global Studies

The School of STEM Education, Innovation and Global Studies brings together academics with expertise and insight across the STEM disciplines, many of whom are already significant leaders and contributors to national and international policy development and knowledge creation in the field. The School has a strong research focus with staff involved in a range of research and development projects across mathematics education, science education and digital learning, spanning the education spectrum from early childhood to teacher education and contributing to core debates across STEM education including policy directives, teacher education, curriculum, innovative pedagogical approaches and informal spaces for STEM education. Academics in the school are active members of the DCU<u>CASTEL</u> centre, Ireland's largest centre for STEM education, working with colleagues in the Faculty of Science and Health.

CASTeL

CASTEL is Ireland's largest research centre in Science, Technology, Engineering, and Mathematics (STEM) education. CASTEL's mission is to support the development of STEM learners from an early age, and so enhance the scientific, mathematical and technological capacity of Irish society. CASTEL has made significant contributions in the field of STEM education both nationally and internationally. Through evidence-based research, CASTEL is leading and advising on the development of innovative and effective curriculum, teaching and learning in STEM education across the continuum from early childhood to postgraduate level.

The Position

The successful candidate will already have national and international recognition in the field of STEM education, with a particular focus on the primary/elementary and early childhood levels. They will have led or been a co-leader of significant research that has informed scholarship and/or policy in the field and have a clear upward trajectory in their research and publications profile. They will have successfully supervised a number of doctoral research students to completion. Given the research priorities in the School of STEM Education, Innovation and Global Studies, and the wider Institute of Education, applicants with a record in mathematics education, computational thinking, design and engineering education are particularly welcome. Engagement with inquiry-based science education and play-based learning, and the role of creativity in STEM education are also important. The St Patrick's Campus of DCU is home to a LEGO Innovation Studio and a Minecraft Suite, both of which are widely used in our programmes and in programmes of continuing professional development and in our research.

Given the particular focus of the Faculty on the preparation of teachers and educators, experience of engagement with undergraduate and graduate programmes of teacher/educator education will be important; the successful candidate will be expected to contribute to a range of modules and programmes at the Institute of Education and to lead the design of new modules and programmes associated with their field of research.

This is the first such appointment in Ireland and one of the few opportunities in STEM Education with a focus on children at the earliest stages of education across the world. The appointment is central to Ireland's strategic focus on STEM in its education system and on supporting educators as innovators and creative thinkers. It will add to DCU's reputation of leadership in STEM Education through the Centre for the Advancement of STEM Teaching and Learning (CASTEL), together with its growing reputation in early childhood education through the Early Childhood Research Centre (ECCRE).

Thanks to the generosity of the funders, support for doctoral/post-doctoral researchers will also be provided for the initial years of the appointment.

Duties and Responsibilities

Research and Scholarship

The successful candidate will be dedicated to high-quality research and publication in the field of STEM education in primary and early childhood education on an individual and a collaborative basis. They will be expected to:

- Develop and support research initiatives with the School of STEM Education, Innovation and Global Studies, CASTeL and the wider university
- Publish articles in top peer-review journals as sole author and as co-author with colleagues
- Apply for national and international grants as PI, or as part of consortia and lead successful projects to completion
- Communicate research findings for practitioner, policy and scholarly audiences
- Attract and supervise high-calibre Research Students.

Teaching and Learning

The successful candidate will be required to contribute to the development, teaching, assessment, and administration of modules across a range of undergraduate and postgraduate programmes, including:

- The design, teaching and assessment of modules at undergraduate, postgraduate and PhD levels
- Contributing to the design, development, and management of future programmes and other developments in the field of STEM education
- Supervising undergraduate and postgraduate theses
- Contribute to the wider teaching of the School and Faculty.

Service and Contribution to University and Society

Activities taken on the successful candidate's own initiative, or allocated by the Head of School, may include:

- Engaging with policy-makers and the media
- Contributing proactively to relevant School and University committees, working groups and meetings
- Representing the School in marketing and the recruitment of students
- Developing relationships with stakeholders within and outside the University
- To enhance the reputation of the DCU Institute of Education through engagement in, and leadership of, external academic, professional, public sector and community activities (approved by the Executive Dean, where appropriate).

Qualifications and Experience

She/he will have a doctoral level qualification in STEM education or a related field and already hold a professor/full professor level post in their current institution or centre. In exceptional circumstances, should an applicant be currently operating at an associate professor level and meet all criteria for the role, they may be considered for interview.

The successful candidate will have an excellent and sustained publication record of the highest international standard the field of STEM education, with a particular focus on the primary/elementary and early childhood levels. They will have a proven track record of excellence in teaching and of inspiring students, and of mentoring colleagues. Evidence of successful grant applications will be important, together with sustained engagement with international professional and scholarly networks. As a Chair, the successful candidate will be expected to make a significant leadership contribution in the School, and the Institute more broadly.

In particular, the successful candidate will present:

- Evidence of delivering exceptional contribution to national and/or international networks
- Evidence of an exceptional engagement with and commitment to pedagogical innovation in the field of STEM education for primary and early childhood education
- A record of engagement with and influence of education policy
- An exceptional and sustained record of publication in leading international journals and conferences and in peer-reviewed book chapters/books from leading publishers

• An excellent record of research supervision and successful completions, particularly of PhDs (or equivalent doctoral degrees) and postdoctoral researchers, that is exceptional in scale and/or quality.

Mandatory Training

The post holder will be required to undertake the following mandatory compliance training: Orientation, Health and Safety and Data Protection (GDPR). Other training may need to be undertaken when required.