

Research Centre	Insight SFI Research Centre for Data Analytics
Post Title	Postdoctoral Researcher: Moving Well-Being Well Project
Level on Framework:	Level 1
Post Duration	Fixed Term Contract up to 12 months

Dublin City University

Dublin City University www.DCU.ie 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.

Insight SFI Research Centre for Data Analytics

The Insight SFI Research Centre for Data Analytics (<http://www.insight-centre.org>) is an SFI funded Research Centre which brings together researchers from University College Dublin, NUI Galway, University College Cork, and Dublin City University, as well as other partner institutions, Trinity College Dublin (TCD), University of Limerick (UL), Maynooth University (MU) and Tyndall National Institute. It creates a critical mass of more than 400 researchers from Ireland's leading ICT clusters to carry out research on a new generation of data analytics technologies in a number of key application domain areas, such as Health and Human Performance, Smart Communities, Internet of Things, Enterprise and Services and Sustainability and Operations.

The €150m Centre is funded by Science Foundation Ireland and a wide range of industry and European Union partners. Insight's research focus encompasses a broad range of data analytics technologies from machine learning, decision analytics and social network analysis to linked data, recommender systems and the sensor web. Together, with more than 220 partner companies, Insight researchers are solving critical challenges in the areas of Connected Health and the Discovery Economy.

Research Career Framework

As part of this role the researcher will be required to participate in the DCU Research Career Framework (<http://dcu.ie/hr/ResearchersFramework/index.shtml>). This framework is designed to provide significant professional development opportunities to researchers and offer the best opportunities in terms of a wider career path.

DCU has a strong track record in attracting both Irish and European Union research funding under Horizon 2020 (and all previous Framework programmes), Marie Curie Actions and Erasmus. We offer a dynamic and internationally-focused environment in which you can advance your academic career.

The Project

The Moving Well-Being Well (MWBW) project, initiated in 2017, is a collaboration between the Insight SFI Research Centre for Data Analytics, DCU's School of Health and Human Performance, and the GAA.

The MWBW project's goal is to help address the growing physical inactivity problem emerging in Irish society, particularly amongst school children. Physical Activity Guidelines for Health currently state that all children and young people, from two to eighteen years of age, should have at least 60 minutes of moderate to vigorous physical activity each day (Department of Health and Children, 2009). The 'Children's Sport Participation and Physical Activity Study' (Woods et al., 2018) found that only 17% of primary school children and just 10% of post primary school children in Ireland were meeting these requirements. While investigating the factors that motivate children to partake in physical activity, the MWBW project emphasises the importance of developing physical literacy in children, of which the fundamental movement skills are a key component. Fundamental Movement Skills (FMS) are the basic foundational movement skills upon which any complex or sport specific skill is built. In Phase 1 of the project work, the MWBW team has measured FMS, and perception of children's performance in these skills, in over 2,000 primary school children across Ireland (Behan et al., 2019), and found low levels of FMS mastery. This is alarming, considering that FMS mastery can be developed by the age of 6. If one cannot move well, then he/she will tend to move less, and a negative spiral of disengagement in activity and sport can begin at an early age.

On the back of the results collated during the first Phase, the MWBW team completed a pilot intervention in 30 Dublin schools with over 1500 first- and second-class children participating. The program included a GAA coach led FMS based class, a teacher training element, in class activities for the teacher to follow, and home activities for the children to include their parents. Initial results are extremely promising, with an increase of over 25% in the children's fundamental movement skills proficiency in just 8 short weeks. Feedback from the GAA coaches has been excellent, with all reporting an uptake in the participating children's engagement following delivery of the FMS based classes. Teachers have reported increased confidence in delivering elements of PE on their own, thanks to the guidance of the coaches, and principals are hugely supportive of the programme due to the on-site nature of the training. The next phase seeks to further refine the program for deployment across a range of ages. In continuing the partnership with the GAA, this has the potential to reach a huge proportion of children across the country. It is envisioned this next phase will lay the foundation for an extensive delivery of the MWBW intervention nationwide.

Principle Duties and Responsibilities

Specific duties include:

- Conduct a programme of research into interventions that develop physical literacy through fundamental movement skills as a means of helping address the growing physical inactivity problem emerging in Irish society, particularly amongst school children.
- Explore the key data metrics needed to measure progress in physical literacy development and build sample models based on existing data.
- Provide assistance and advice to PhD students working on similar topics.
- Assist the Principal Investigators (PIs) in partnership with the stakeholders, novel ways of assisting teachers to provide physical activity opportunities will be explored
- Produce top quality journal and conference publications, in collaboration with the PIs.
- Participate in Insight Centre activities, including industry showcases, annual reviews and industry and agency visits to the Insight labs.
- Carry out administrative work associated with the programme of research as necessary
- Other tasks relevant to successfully implementing the assigned research programme.

Minimum Criteria

The candidate must have a Ph.D., ideally in the area of Sports Science, or a related discipline.

In addition, it is desirable that the individual has a subset of the following skills and experience:

- Relevant experience in conducting research in a school setting.
- Excellent written and verbal communication and interpersonal skills.
- Proven ability to prioritize workload and work to strict deadlines.
- Proven ability to work in the school setting.
- Proven ability to implement interventions in a school setting.
- Proven ability to utilise advanced statistical analysis techniques.
- Ability to work in a team and to take responsibility to contribute to the overall success of the team.
- Strong problem solving abilities.

Mandatory Training:

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

Candidates will be assessed on the following competencies:

Discipline knowledge and Research skills – Demonstrates knowledge of a research discipline and the ability to conduct a specific programme of research within that discipline

Understanding the Research Environment – Demonstrates an awareness of the research environment (for example funding bodies) and the ability to contribute to grant applications

Communicating Research – Demonstrates the ability to communicate their research with their peers and the wider research community (for example presenting at conferences and publishing research in relevant journals) and the potential to teach and tutor students

Managing & Leadership skills - Demonstrates the potential to manage a research project including the supervision of undergraduate students.