

RESEARCH MATTERS

Celebrating research success and opportunities at the University of Wolverhampton

ISSUE 11



New research project to capture community pandemic response

A team of academics at the University of Wolverhampton has been successful in winning a bid to carry out research into the local community response to the COVID-19 pandemic.

The Institute of Community Research and Development (ICRD) has secured the project from the West Midlands Combined Authority (WMCA) Public Service Reform Directorate, which is looking to evidence the innovation and enterprise shown by the West Midlands local community in response to COVID-19.

The ICRD will lead the research project in partnership with the Birmingham Voluntary Service Council (BVSC) and academic colleagues at Coventry University.

The Institute for Community Research and Development (ICRD) works with partner organisations to undertake pioneering community development

studies that improve the life chance of individuals. The team delivers research and evaluation projects and has worked with the Home Office, the Economic and Social Research Council, the NHS, the Criminal Justice System and other UK and European organisations.

The research project will capture a range of responses to the pandemic from communities across the West Midlands' 18 Local Authorities, including voluntary and community organisations, faith groups, mutual aid groups, neighbourhood groups, and social enterprises. Evidence that highlights innovation, enterprise, good practice or flexibility will be covered in the research.

Councillor Maria Crompton, WMCA portfolio lead for public service reform and deputy leader of Sandwell Council, said: "People across the region have organised themselves to look after their neighbours during the pandemic, creating new collaborative links between them, their communities, and the public services and businesses that underpin their lives.

"The challenges we have collectively faced have been immense. We must acknowledge that there are still hard times to come and we must all work together to face these challenges in the months ahead.

"In trying to build back better, we need to understand what has worked well, and what WMCA can do through its investments and partnerships to nurture and make space for that."

The WMCA also covers three Local Enterprise Partnerships (LEPs) across the West Midlands region. The research report will be available in the autumn and will feed into the Comprehensive Spending Review process and Devo Next.

RESEARCH PROJECT LOOKS AT EDUCATIONAL CHALLENGES FACED BY COVID-19 EXITING CONTENT

A University of Wolverhampton academic will undertake vital research which looks at the educational challenges faced by COVID-19.

Professor John Traxler, based in the University's Education Observatory in the Faculty of Education, Health and

Wellbeing, is working with the EdTech Hub to undertake the research and drafting for two reports which will help governments around the world combat the educational challenges produced by the current pandemic.

The EdTech Hub is a global initiative supported by UK government's Department for International Development (DFID), World Bank and Gates Foundation.

Professor Traxler said: "It's been extremely interesting to see how the education sector facing the current pandemic can learn from experience of using digital technology to deliver learning outside of the traditional classroom.

"The first report will explore how the digital learning projects and pilots of the



last two decades in the Global South, especially in low-resource and crisis or conflict situations, can help maintain the continuity of education systems worldwide which are now under stress and, more importantly, how these can help combat the potential increase in educational inequality caused by the pandemic."

The Observatory team working with Professor Traxler will be Dr Howard Scott and Dr Matt Smith.

EDITOR'S WELCOME

This first edition of the 2020 *Research Matters* series reaches you much later than normal, as the global pandemic has brought many interruptions.

The Funding Bodies paused REF2021 in March (and restarted on 31 July 2020) and we had to delay our own Research Investment Funding round RIF4. Research labs were closed and long-running programmes in some cases literally put on ice. In a very short space of time, our Doctoral College moved the entire researcher development programme online and developed a new process and guidance for delivering Viva Voce examinations online. ARC2020 and Researcher Development week were delivered virtually with new record attendance. Our researchers responded by developing amazing new projects, re-profiling resources from existing projects, sharing equipment, skills and expertise, and volunteering in frontline services. For many, research had to be put on hold as they were looking after the health and wellbeing of others. In this edition of *Research Matters*, we celebrate the achievements of many colleagues and teams. But I wanted to sincerely thank our entire research community – academic and professional staff, research students, research administrators, technicians and research collaborators – for all their efforts and commitments to continuing to develop research at Wolverhampton.

Professor Silke Machold
Dean of Research
University of Wolverhampton

3D printed self-adjusting smart swabs developed for COVID-19 testing

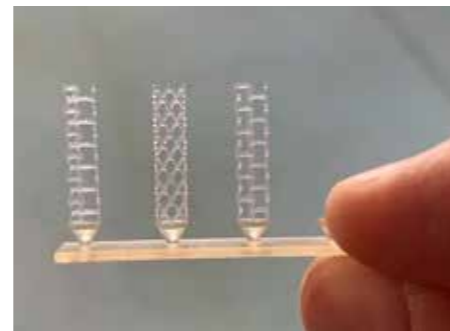
A 3D printed self-adjusting smart swab, which could be used for COVID-19 testing, has been created by researchers at the University of Wolverhampton.

It provides greater levels of comfort to those being tested due to its unique shrinking design and could help tackle potential swab shortages in the coming months as it can be printed on demand.

The team, Dr Arun Arjunan, John Robinson, Dr Ahmad Baroutaji and Suhaib Zahid from the School of Engineering have for the first time developed the one size fits all nasopharyngeal (the upper part of the throat behind the nose) swab using the concepts of mechanical meta-materials. This allows the 3D printed smart swab to navigate through the nasal

cavity with significantly less stress on the surrounding tissues.

Diagnoses of COVID-19 are currently being confirmed using a test that relies on nasopharyngeal swabs. Many countries are now facing shortages of these swabs, and the shortages will become even more critical in the coming months due to increased testing and global concerns over a second COVID-19 wave. This shortage triggered the team to focus on the potential to create nasopharyngeal swabs through 3D printing at the University's engineering laboratories.



Research explores emotional eating during COVID-19

People's eating habits during the COVID-19 pandemic are providing food for thought in a new piece of research led by the University of Wolverhampton.

The 'Food, Mood and You' study is surveying people over the age of 18 each day for a single week in which they are noting their activities, emotions and how they are eating.

The research is to look at how emotions such as frustration, stress and boredom which have arisen during the pandemic have affected the way people approach eating and food.

The study is being rolled out internationally and Professor Tracey Devonport, from the University of Wolverhampton, is working on the project.

New methods of construction click into place with research funding

University of Wolverhampton academics have helped secure funding to accelerate research into Modern Methods of Construction (MMC) and find solutions to the UK housing crisis.

Academics from the University's School of Architecture and Built Environment will be working alongside local Black Country manufacturer, Totally Modular, who is leading on the project after

securing a project worth £2m from UK Research and Innovation (UKRI).

STELLAR, the consortium of academic, technical, industry and end user stakeholders which includes Citizen Housing, TDS, Spacious Place and Jali, will explore the potential of producing a common steel framing platform without the need to start from first engineering principles when designs change.

Totally Modular is a manufacturer of Volumetric Modular Homes aimed at the Affordable and Social Housing market and STELLAR will offer social housing developers and owners the tools and business models they need to provide affordable homes across the UK in line with demand.

The model centralises complex and high-cost design, frame manufacturing and warranty tools within a central virtual 'hub', supporting SME-operated 'spoke' factories near to the point of need.



Novel Perceptions: Towards an inclusive canon

In a new research project, experts from the University of Wolverhampton and the Huygens Institute in the Netherlands will look at how society and readers' backgrounds affect the judgment of novels.

The project, entitled '[Novel Perceptions: Towards an inclusive canon](#)', has been awarded an Arts and Humanities Research Council grant of almost £300,000 and will run for 18 months in collaboration with BBC Arts and a host of other project partners.

In October, the Novel Perceptions researchers are launching the '2020 Reader Review' survey, which asks readers to rate the perceived literariness of 400 contemporary novels. Participants will be asked for their opinions about how good a novel is versus their enjoyment of fiction. The team will also use innovative computational research methods to investigate the novels in terms of degree of difficulty, sentence length and vocabulary.

The outcome will contribute to the debate about how to create an English literature canon that is open and inclusive – fit for the 21st century.

The Principal Investigator of Novel Perceptions, [Professor of English Literature Sebastian Groes](#), said: "Novel Perceptions asks us to look critically at the English canon."

You can follow the project via its [website](#), [Twitter](#) and [Facebook](#).

REVEALED: THE MOST OVERUSED POP CULTURE REFERENCES IN ACADEMIA

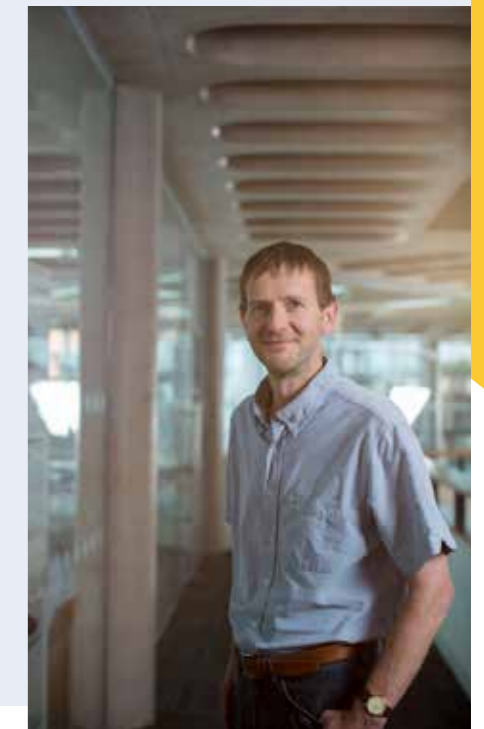
Dropping an amusing pop culture reference into the title of a journal paper has frequently helped scholars find more readers for what can sometimes be rather technical treatises.

But a new analysis of some of academia's more wittily named papers has highlighted where this irreverent approach has lost some of its power, and once-droll references have become clichés.

According to a preprint paper on the [arXiv](#) server, which identified the most commonly used cultural references across 3.3 million journal articles published since 1996, the most overused poetic allusion in academic literature comes from William Shakespeare's Hamlet; the "to be or not to be" line or variants of it ("to treat or not to treat"; "to test or not to test") have been used in more than 2,000 titles.

Tina Turner's anthemic 1984 pop hit What's Love Got to Do With It? is a less obvious starting point, but the phrase "got to do with it?" has proved surprisingly popular with academics and has been used 787 times in journal titles, according to the paper, "Pot, kettle: Non-literal titles aren't (natural) science" by Mike Thelwall, professor of data science at the [University of Wolverhampton](#).

Professor Thelwall hopes his detection of the 149 most used allusions will encourage scholars to use more unusual phrases. "The idea for the paper came from reviewing an article for a journal with 'standing on the shoulders of giants' in its title," recalled Professor Thelwall, who advised the author to change it after finding it had been used in 364 previous academic titles.



Find out more about our research at: wlv.ac.uk/research

Fellowships

The Early Career Researchers' Award Scheme (ERAS)

Name	Faculty	Project
Dr Melanie Best	FEHW	'Examining the lived experiences of disabled female staff in relation to their employment and career progression at the University of Wolverhampton.'
Dr Robert Francis	FABSS	'Chain Coral Chorus'
Dr Eun Sun Dodwin	FABSS	'Road to co-learning and co-growth: exploration of knowledge creation and transfer process in Emerging Market (EM) post-acquisition'
Dr Sophie Kent	FEHW	'Developing the ability to perform under pressure'
Dr Gurbinder Lalli	FEHW	'Children's mealtime: A study of school food and nutrition education in one primary academy'
Dr Marion West	FABSS	'Supporting Autonomy and Negotiating Advice in Dissertation Supervision – a case study of face-to-face and online interaction : expectations, interactions and reactions.'
Dr Julie Wilde	FEHW	'How can former PGCE early career teachers inform initial teacher education in further education?'

The Lord Paul Fellowships

Name	Faculty	Project
Dr Alice Clark	FSE	The Molecular Details of the Human Body's Fight Against Aging and Age-Associated Disease
Dr Matthew Palframan	FSE	'Towards the control of the sand fly <i>Lutzomyia longipalpis</i> , vector of the human disease American visceral leishmaniasis'
Dr Emmanuel Daniel	FSE	'Development of a simulation framework for construction SMEs to fully integrate off-site and LEAN approaches in UK Housing Delivery'
Dr Andrew Jolly	FABSS	'The "Cost of the Diet" in Wolverhampton: Analysing foodscapes and food poverty in a Midlands city'
Dr Simon Maddock	FSE	'Life on the corridor: Preservation and connectivity of remaining forests in the Choco Andean Ecological Corridor, Ecuador'
Dr Metka Potocnik	FABSS	'ALL HER VOICES Record Label: A Feminist Approach to Intellectual Property Assets'

Announcements: New UoW Profs, Associate Profs and Readers

Angel Armesilla – Professor of Cardiovascular Molecular Pharmacology – FSE – Research

Diana Bannister – Professor of Innovative Professional Practice in Education – FEHW – Learning & Teaching

Alexandra Forsythe – Professor of Applied Psychology in Teaching and Learning – FEHW – Learning & Teaching

Ian Lahart – Reader in Clinical Exercise Science – FEHW – Research

Arun Arjunan – Reader in Additive Manufacturing of Functional Materials – FSE – Research

Ezekiel Chinyio – Reader in Construction Management – FSE – Research

Stefano Vaglio – Reader in Animal Behaviour – FSE – Research

Julie Hughes – Associate Professor Learning and Teaching Enhancement – DSAS – Learning and Teaching

Linda Devlin – Associate Professor of Professional and Doctoral Pedagogy in Education – FEHW – Learning and Teaching

Opinderjit Kaur Takhar – Associate Professor of Sikh Studies – FABS – Knowledge Exchange

Ross Cloak – Associate Professor of Sport and Exercise Science – FEHW – Knowledge Exchange

Marie Sklodowska-Curie Individual Fellowships awarded in 2020

PI - Prof. Gary Hix

Head of the Wolverhampton School of Science, Professor of Materials Chemistry

Project Title: Isoreticular Metal Phosphonates for Energy and Light – IMPEL.

Project Abstract: The three key challenges in developing new photovoltaics for the conversion of solar energy to electricity are: high efficiency, low cost and long life. In this context, this project aims to develop and study new multifunctional materials to act as hosts for semiconductor quantum dots and nanoparticles, and to use them in the manufacture and study of solar cells and LEDs.

PI - Prof. Meena Dhanda

Professor of Philosophy and Cultural Politics

Project Title: Freedom From Caste: The Political Thought of Periyar E.V. Ramasamy in a Global Context – CasteFree

Project Abstract: This project aims to provide a systematized and critical account of the political thought of Periyar E.V. Ramasamy (1879-1973), a key leader of the Dravidian Movement in South India and champion of anti-casteism and women's liberties. Taking an interdisciplinary approach, the research engages with primary works of Periyar covering a period of almost five decades.

PI – Dr Stefano Vaglio

Reader in Animal Behaviour

Project Title: The Enriched Primate – EnPrim

Project Abstract: The aye-aye (*Daubentonia madagascariensis*) is the only surviving species of the Daubentoniidae, the oldest family of the living lemurs, one of the 25 most endangered primates in the world, and shows a low success rate in captive breeding. This multi-zoo project aims to identify and reproduce the female aye-aye's fertile chemical signature and test its effects on the breeding success and welfare of three captive troops.

Find out more about our research at: wlv.ac.uk/research