

# PhD Opportunity

Application of Universal Design and Universal Design for Learning (UDL) in post compulsory education

## **Supervisory team**

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## **[Inclusion by Design Research Group](#)**

## **The PhD Opportunity**

Investigating the impact for Inclusive Education of Universal Design for Learning with the application of Virtual and Artificial Technologies

Traditional educational curricula, pedagogies, and assessment design, whether in Higher Education Institutions (HEIs) or in the maintained sector, often create barriers for 'learners on the margins', and this is especially so for learners with disabilities. This is due to several factors, including the use of inaccessible materials, lack of flexible learning options, and a focus on one-size-fits-all teaching and assessment. The Universal Design for Learning (UDL) framework can be used to design learning experiences that are mindful of the diverse learners' requirements. The framework is enabling because it empowers educators to anticipate some of the challenges diverse learners may face, and thereby facilitates the design of learning and assessment pathways that are accessible to all.

The framework provides a targeted scaffolding of learning design incorporating three main areas:

1. Multiple means of engagement: This involves providing learners with different ways to be motivated and interested in learning, such as through choice, challenge, collaboration and, where possible encouraging co-production.

2. Multiple means of representation: This includes, for example, involving learners with different ways to access information, such as through text, images, audio, and video. Increasingly, this aspect of representation involves the use of virtual and artificial technologies (VATs)

Multiple means of action and expression: This strand provides learners with different ways to demonstrate their learning, such as through writing, speaking, drawing, and problem-solving. This approach recognises potential assets that all learners take to the learning space.

While there is a growing body of research pertaining to the use of VATs to support education, there are no current studies in this field that take specific cognisance of how a UDL approach may add value to accessibility and enable diverse learners to best demonstrate their learning. VATs have the potential to provide learners with a variety of benefits, such as increased access to learning, improved learning outcomes, and reduced barriers to learning. The research will augment existing research tenders and doctoral lines of inquiry that are currently aligned to the Inclusion by Design (IBD) Research Group and help strengthen our ambition to become a Research Centre.

### **Project aims and objectives**

Ultimately the proposed PhD project aims to enhance educational experiences for all learners by identifying the affordance of VATs through the application of a UDL approach. Specific research objectives include:

Investigating how VATs can be used in educational settings while simultaneously applying the three facilitating stands of UDL, with a particular focus on multiple means of representation (as identified in strand 2 above).

Identifying the challenges and opportunities for using VATs to support the inclusion of all learners, especially those who may be marginalised, for example disabled learners.

Garnering the views of learners and educators regarding the enabling and challenging features of adopting a UDL approach to applying VATs in learning environments.

Revealing aspects of accessible pedagogical design and assessment to inform policy and practice in these fields.

Suggesting additional lines of inquiry that may be followed through using UDL to further inform the application of VATs.

### **Indicative research method**

The nature of the methodological approach will be dependent on the aspirations and experiences of the research candidate. However, as indicated on the Inclusion by Design website, suggested research methods might include Participatory Action Research, Design Based Research and / or the use of a mixed methods approaches, involving a combination of qualitative and quantitative methods. The research methodology will be jointly agreed by the research team and the PhD candidate concerned.

## Application Process

To begin the application process please go to [Education MPhil/PhD Webpage](#) and click on 'How to Apply' in the top menu. This PhD could be carried out on a part time or full time basis so please select the relevant application link. On the application form, please make it clear that you are applying for one of our advertised projects so we can direct it straight to the relevant people.

## The Interview

All successful applicants will be offered an interview with the proposed Supervisory Team. You will be contacted by a member of the Research School Team to find a suitable date. Interviews can be conducted in person or over Microsoft Teams.

## Funding your PhD

For more information about Doctoral Loans please visit:

<https://www.worc.ac.uk/study/fees-and-finance/doctoral-loans.aspx>

During your PhD you can access the Research Student Support Scheme to support dissemination costs associated with your research, up to £500 a year.

## Research at the University of Worcester

Research is central to the University's mission to make a difference in everything that we do. We are committed to delivering excellent research which extends the boundaries of human knowledge but which also improves people's lives by enabling better health outcomes, improving food security, developing environmentally sustainable solutions for crop production and socially sustainable solutions to our ageing population, enhancing public knowledge and understanding of the past and present.

The University hence focuses its research around five high-level challenges facing society, locally, nationally and globally:

- [Human Health and Wellbeing](#)
- [Sustainable Futures](#)
- [Digital Innovation](#)
- [Culture, Identity and Social Exclusion](#)
- [Professional Education](#)

The success of our research is reflected in our continuous improvement in external research assessment processes. In the most recent Research Excellence Framework, REF 2021, the University saw a near 50% increase in the scale of its research and 12% increase in quality, building on its performance in REF 2014 when it was the UK's most improved university in terms of Research Power, a combination of scale and quality.

## Research Degrees at Worcester

Our research students are central to our overall mission for research. They are working at the cutting edge of their disciplines and driving forward the quality of our research whilst enriching our research culture. We are looking to increase our research student numbers as a strategic imperative.

Our commitment to our students is reflected in the results of the Postgraduate Research Experience Survey 2023 in which we ranked 3<sup>rd</sup> for overall research student satisfaction nationally. Key to our success in this area is the Research School, a focal point for all our research students.

It provides:

- day-to-day support for our students, both administrative and practical, through our dedicated team
- a Research Student Study Space with both PCs and laptop docking station
- a comprehensive Researcher Development Programme for students and their supervisors
- a programme of student-led conferences and seminars

## Research Group

### Inclusion by Design Research Group

This community of researchers and practitioners is keen to promote ever greater inclusive practice through inclusive curriculum and learning space design and is linked with the International Collaboratory for Leadership in Universally Designed Education. The values are underpinned by the concept of inclusive educational design and the research group participants believe that there is much to be learned from an interdisciplinary approach to how learning is advanced, being particularly mindful of learning requirements of learners who have been marginalised.

Our shared research and endeavours are further informed by the conceptual frameworks and strategies provided by Universal Design and Universal Design for Learning. We see merit in approaches that seek to better understand learner experiences and that encourage learner engagement in design processes.

### Widening Participation:

As part of its mission statement the University is committed to widening participation for its higher degrees. Although most candidates will have an undergraduate and/or a Masters degree, the University is happy to accept applications from candidates with relevant professional qualifications and work related experience.

**For further information** or an informal discussion on this project, please contact Dr Sean Bracken (Director of Studies) via email at [s.bracken@worc.ac.uk](mailto:s.bracken@worc.ac.uk)