



## Postdoctoral Fellowship

### Project Title: Advancing Pedagogical Innovation through Digital Transformation in Teacher Education

**Scope of Research:** This Postdoctoral Fellowship is located within the newly established Education Faculty Digital Innovation and Learning Institute at Stellenbosch University. The Institute serves as a transformative research and practice hub for digitally enhanced teacher education, simulation-based learning, and pedagogical innovation.

The successful candidate will explore how advanced technologies can be integrated into pre-service and in-service teacher training, curriculum design, and inclusive pedagogical practices. Areas of focus may include:

- **Artificial Intelligence in Education:** Adaptive learning systems, automated feedback mechanisms, and ethical considerations in AI-assisted instruction.
- **Mixed, Extended, Virtual and Augmented Reality:** Development and evaluation of immersive simulations for teaching practice, classroom management, and inclusive learning environments.
- **Educational Robotics and Coding Pedagogies:** Design-based research on hands-on STEM learning and computational thinking in initial teacher training.
- **Learning Analytics and Data Dashboards & Interactive Media and Digital Content Creation:** Use of real-time learner data to support personalised learning pathways and informed pedagogical decision-making.
- **Machine learning, Deep Learning and Natural language processes for Education:** Natural Language Processing and Technologies: Exploring voice, text, and speech-to-text technologies to enhance access and participation across diverse language groups.

The fellow is expected to contribute to the theoretical, methodological, and applied dimensions of digital innovation in education, and support the Institute's broader aims of equity, inclusion, and pedagogical transformation.

#### Host:

**Prof. Anass Bayaga**

Acting Director, Digital Innovation and Learning Institute  
Faculty of Education, Stellenbosch University, South Africa  
Email: abayaga@sun.ac.za

#### Requirements:

- A **PhD in Education**, Educational Technology, Learning Sciences, Data Sciences, Information technology, Computer Science, Digital Pedagogy, or a closely related field (obtained within the last five years).
- Proven track record of **research in digital learning, simulation teaching, or AI in education**.
- Evidence of the **ability to publish** in accredited peer-reviewed journals.
- Experience in **design-based research, digital tool development, or teacher education** is highly desirable.

#### Fellowship Details:

- **Value:** R400 000 per annum and workspace (tax-free)
- **Benefits:** Office space within the Institute; access to state-of-the-art digital infrastructure
- **Duration:** 1 year (renewable for a second year)
- **Location:** Stellenbosch University, Western Cape, South Africa
- **Start Date:** As soon as possible



**Stellenbosch**

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## Key Responsibilities

- Conduct original, high-impact research that explores the integration and implications of advanced technologies in education, with an emphasis on innovation in teaching and learning.
- Produce a minimum of two subsidy-bearing publications per annum, contributing to the national and international scholarship on digital pedagogy, immersive learning, and data-informed education.
- Co-design and evaluate pedagogical innovations such as simulation-based teacher training modules, educational robotics programmes, virtual teaching labs, and AI-assisted learning environments.
- Contribute to research grant proposals, institutional innovation initiatives, and external collaborations that support the Institute's strategic focus on future-ready teacher education.
- Facilitate or support workshops and training programmes for students, educators, and academic staff on the use of digital tools, content creation, and inclusive instructional design.
- Present research findings at local and international conferences, and contribute to knowledge exchange activities across the education and technology sectors.
- Supervise honours and master's students undertaking research in areas aligned to the Institute's focus on digital innovation, inclusive design, and experiential pedagogy.

## Application Deadline: 30 May 2026

### Application Procedure:

Send a letter of application, **curriculum vitae (CV)**, a list of publications, and the names and contact details of **at least two referees** to [abayaga@sun.ac.za](mailto:abayaga@sun.ac.za).

Referees should submit **confidential reference letters** directly to the same email address by the closing date.

### Note:

1. Postdoctoral fellows are **not appointed as employees** and are therefore **not eligible for employee benefits**. Fellowships are **tax-free awards**. The University reserves the right **not to make an appointment** if suitable candidates are not found.
2. Renewal for the second year is subject to satisfactory progress