



**U21 Universities' Education
Position Statement on
The 4th Industrial Revolution
and the Future of the University**

University of Johannesburg, October 2019

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Note:

This U21 Universities' Educational Position Statement was drawn up, reviewed and refined following a series of meetings by those Senior Educational Leaders attending the U21 Educational Symposium in October 2019. It represents the collective views of the network's university educational leaders in global research-intensive universities on a key educational topic. The significant impact of the Covid-19 pandemic on universities, and the subsequent, rapid transformation of most global higher education teaching, learning and assessment to online platforms, post-dates this paper. However, this paper shows that, in their discussions, the U21 Senior Educational Leaders were already highlighting the pressing need to develop well-designed, adaptable approaches to fast-changing higher educational needs. Little did they know how soon they would be implementing so many of these changes, and continuing to use their colleagues in the U21 network to share resources, ideas and solutions.

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The 4IR: New Education Challenges and Opportunities for Research-Intensive Universities

- a. The 4IR Context
- b. 4IR Challenges
- c. 4IR Opportunities
- d. U21 Network Advantages

The 4IR Context

- Rapidly developing technology/AI/automation has had an increasing impact on the viability of traditional avenues of employment and changes the traditional patterns of education.
- Education to enhance employability has become increasingly important at all levels, in all delivery/access modes and, importantly, across the life-course.
- New technologies have allowed education to become more accessible to a greater number of learners in different ways, and to be more adaptable to the changing learning needs of both 'beginning' higher education students and those already in a dynamic job market.
- The further decline in public funding for higher education and growing sustainability challenges have encouraged the development of new education delivery models using technology.
- Traditional campus-based face-to-face teaching and learning is both enhanced and challenged by online learning, and new models of blended, extended and collaborative learning continue to be required.

- There are rapidly growing numbers of educational technology companies developing short-form credentials and accessible, just-in-time, re-training of workers with redundant skills; these types of short-term credentials continue to change the higher education landscape.
- There is a proliferation of social/media public communication that challenges trust in established expertise and scientific truth. These challenges require universities to adapt different approaches to the presentation of robust and proven evidence, underpinning the importance of evidence-based expertise.

4IR Challenges for research-intensive universities

- The traditional research-intensive, face-to-face education model is coming under increasing economic and social pressure, and adaptations will be required. How can universities adapt in ways that offer new learning opportunities while retaining what is valued in their current model?
- What new partnerships are required to meet growing and changing needs; for example, collaborations between universities, with employers and with local communities?
- What will be the best models of delivery to offer both university campus and online learning opportunities to more learners and in different ways across their life course?
- How will the student-as-learner need to be reconceptualised in the 4IR learning landscape?
- How will universities be able to engage and support their staff to meet these new challenges effectively?

4IR Opportunities for research-intensive universities

- Use the challenges to stimulate new thinking to rebuild public confidence in, and support for, research-intensive universities in a rapidly changing higher education environment.
- Build on (and vigorously defend) the university's status as a 'trusted knowledge provider.'
- Engage proactively in the 'futures' education agenda, to ensure our universities are prepared and actively helping to shape the future education landscape.
- Continue to review, resource and support the best digital systems through which to deliver high-quality online teaching, learning and assessment to best meet the growing need for flexibility in educational provision.
- Draw on our multi-disciplinary research expertise to engage students and staff in integrated learning that can better understand and address the 'grand challenges' facing society.

- Embrace the new models of micro/distributed/extended/just-in-time learning and position our universities as the top quality and most trusted providers in that landscape.
- Review and rethink the traditional economic model of a research-intensive university and propose new models (before alternative models are imposed on universities).
- Reimagine both the traditional university staffing model to better meet these new challenges, and the career-long professional training offered/required.
- Develop new forms of global collaboration in teaching in research-intensive universities using technologies and drawing on our extensive shared research base.

How the U21 Network can help

- U21 represents an important global cohort of research-focused universities that values the connectiveness between research and top-quality education.
- The ability to share resources and expertise across universities in the network strengthens any individual university's capacity to respond effectively to a changing academic environment.
- The U21 network has the capacity not only to share expertise at the most senior levels but also to train and support the next generation of emerging university leaders, ensuring that they develop their careers with a truly international perspective.
- The U21 network has the capacity to explore its potential of developing a shared catalogue of online academic development resources, aligned to a peer-review quality assurance framework, to support U21 faculty & staff to up-skill in emerging areas; e.g. the specific challenges of the 4IR. The network can also test its ability to become a test bed for micro-credentials for the wider continuing professional development (CPD) market.
- There is considerable diversity across the network's universities which can be harnessed to enrich and deliver U21's shared vision of social justice, equity and diversity of the student body.
- In new, challenging times, U21 has the capacity to re-state the guiding values of the university and to make an updated commitment to truth and freedom of ideas in higher education.

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