8. Higher Education and the Fourth Industrial Revolution (4IR) (Thabang Mafokoane)

Education has the power to improve lives. According to the United Nations’ Sustainable Development Goal 4 (2018), a good educational system should “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”. A quality education is one that responds to societal needs, as well as local and global trends. The Fourth Industrial Revolution (4IR) is a global phenomenon that is rapidly gathering pace. A report by the World Economic Forum (2016) described how the 4IR will “shape the future of education, gender and work”. Technologies such as virtual reality, robotics, augmented reality, big data, the internet of things (IoT), Artificial Intelligence (AI) and digitalisation are becoming more accessible. The speed of technological transformation is exponential and offers seemingly endless possibilities. The impact of the 4IR on the education system cannot be ignored. There is a need to learn new things in different ways. Schools and universities must foster innovation and creativity. This paper discusses the impact of the 4IR on education. The implications for teaching, learning, research and service delivery are explored from basic education to higher education. The paper starts by reflecting on South African society and the history of education. Global teaching and research trends and innovations are examined. The paper concludes with opportunities and challenges for education with regards to the 4IR.

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