

Title:**Implementing Effective Online Learning Transitions for Masters in Nanoscience Students During COVID-19****Authors:** Sanjeev Rambharose¹, Admire Dube², Rekha Rambharose^{3*}*Corresponding author: rambharose@uwc.ac.za¹ Department of Physiological Sciences, Faculty of Science, Stellenbosch University, Stellenbosch 7602, South Africa² School of Pharmacy, University of the Western Cape, Bellville, South Africa³ Directorate of Learning, Teaching and Student Success, University of the Western Cape, Bellville, South Africa.**Abstract**

The recent onset of the COVID-19 pandemic has rapidly infiltrated all aspects of education within the global context creating paramount uncertainty, fear, stress, discomfort and anxiety for scholars and educators. The limitations created by this pandemic created an academic catastrophe resulting in government and higher education institutions initiating extensive support frameworks, systems and coordinated efforts to mitigate the negative impacts of this pandemic on education systems, teaching, learning and to ensure continuity of learning through innovative modes of remote emergency online learning. Successful online teaching platforms are largely influenced by the constructivist learning theory. Additionally, effective delivery of online platforms necessitates increased student support which translates into increased resources, facilities, infrastructure, funding, higher student input demands and commitment from relevant stakeholders within higher education. This has resulted in a myriad of research within the area of higher education and rapid transitions into online learning during the pandemic (Umek *et.al.*, 2020). These rapid transitions between learning modes have called for educational institutions to re-evaluate and strategically deliver on the core mandate of teaching, learning, assessment, and student success. This has resulted in the increased use of ethics of care (Feldman, 2020) and ubuntu pedagogies which has become a major discourse in student learning and online learning practices especially during the pandemic period. This research aimed at evaluating if these pedagogies are key concepts to engage with and implement in the present time and to establish its effectiveness in engaging active learning, providing student support and promoting student success for the Masters in Nanoscience programme. The significance of this research is the contribution it will make in developing teaching and learning strategies for the post-pandemic era. A qualitative research approach using interviews and surveys was adopted to analyse the *lived-in* experiences of students and lecturers in this programme. Students in this study participated in intervention and support workshops to transition into online learning, followed by structured synchronous and asynchronous lectures and support.

This research project focused on implementing tailored virtual student support, ethics of care and ubuntu pedagogy for students in the masters in nanoscience programme as an approach to effectively migrate from traditional face-to-face blended learning approach to a fully online learning approach in response to *emergency remote online learning* during the COVID-19 pandemic and lockdown constraints. The findings from this research showed that the resistance to online learning was commonly experienced by both students and lecturers. Students openly expressed their fears,

anxiety, uncertainty, and discomfort with online learning and wanted to return “to normal” at the soonest despite the interventions and implementation of ethics of care and Ubuntu pedagogies. Interestingly, the ethics of care and ubuntu pedagogy came through as new concepts to seasoned educators who actually do teach from a disposition of care. This research has demonstrated the need for ongoing support, academic development, awareness of care and ubuntu pedagogies, training and coping strategies for the University community to be able to easily adapt and transition across multiple modes of teaching and learning during the unpredictable pandemic and post-pandemic period. Further to this, this research seeks to answer the crucial question of what have we learnt from this experience and how will it impact the future of higher education?

Keywords

Student learning, Ethics of care, ubuntu pedagogy, online learning, student support, COVID-19

Conference themes: student learning and academic development

Key questions for discussion

1. What has the transition to remote emergency online learning, teaching and assessments taught us about ourselves as educators?
2. What were some of the advantages that emergency remote online learning offered scholars and educators during the COVID-19 pandemic?