Journal of Curriculum Studies Research

https://curriculumstudies.org

E-ISSN: 2690-2788

Volume: 5 Issue: 1 2023

Editorial, pp. i-x

Creating Sustainable Learning Environments in the Era of the Posthuman: Towards Borderless Curriculum

Bekithemba Dube*[a], Sechaba Mahlomaholo[b], Wendy Setlalentoa[c] & Bulent Tarman[d]

* Corresponding author
Email: DubeB@ufs.ac.za

a. University of the Free State, South Africa

b. University of Mpumalanga, South Africa

c. Central University of Technology, South Africa

d. Turan University, Almaty, Kazakhstan

10.46303/jcsr.2023.1

How to cite
Dube, B., Mahlomaholo, S., Setlalentoa, W., & Tarman, B. (2023). Creating Sustainable Learning Environments in the Era of the Posthuman: Towards Borderless Curriculum. *Journal of Curriculum Studies Research*, 5(1), i-x. https://doi.org/10.46303/jcsr.2023.1

ABSTRACT
This editorial is a culmination of various research on the area of posthuman theorization as applied to the field of education. It also focused on the need for borderless curriculum to circumvent global challenges such as genocide, terrorism among other things. It details the rationale of adopting a post human and borderless curriculum to respond to the ambivalence brought by the corona virus. The special issue gives alternatives which emerged during the pandemic and arms educators and learners with new models of learning that will ensure education system is not disrupted on the even another pandemic emerges. The argument of the special issue is that within the auspices of posthuman and borderless curriculum something else, and new is possible through working and thinking together.

KEYWORDS
Posthuman; borderless curriculum; initial teacher education; COVID-19; new innovations.

CREATING SUSTAINABLE LEARNING ENVIRONMENTS IN THE ERA OF THE POSTHUMAN: TOWARDS BORDERLESS CURRICULUM

In the history of the world, the past two centuries witnessed unparalleled destruction of the planet by humans that even changed the climatic conditions thereof resulting in global warming, desertification, highest levels of water and atmospheric pollution, unemployment, poverty, hunger, violence, vandalism, wars, crime, rape, xenophobia, gender-based murders, unknown and new deceases, you name it. All these sacrifices at the altar of greed and the human being's insatiable appetite for consumption of everything, without thinking about the future generation and the sustainability of the planet (Tarman, 2020). Foregrounded by this, it is critical to examine curriculum across border to ignite educational solutions that challenge systematic trajectories facing humanity across the globe (Dube et al., 2022; Sevnarayan, 2022).

In addition, one would say almost timely, technological advances ushered in the era of the Fourth Industrial Revolution - Industry 4.0. To date there is even a race to participate in the production and use of artificial intelligence - AI which is even a step higher than 'mere' digitisation. Technologies are enabling humans to continue with their activities, like teaching and learning effectively, even though remotely or in a blended (Chong & Quek, 2022; Kalimullina et al., 2021). Industry 4.0 with its attended artificial intelligence has accelerated these processes even further. Adaptive Learning - AL as an example of the software in devices that use sensors and algorithms, is enabling students and their lecturers alike to perform academically and otherwise better, far beyond their so-called natural human abilities. For example through AL, a student's learning is personalised, individualised and customised to his or her particular needs, orientations, styles of learning, preferences, etc. AL functions like a companion, a buddy who can respond to all the students' enquiries and questions. It scaffolds and mediates the learning from where a student is to the required levels. It suggests what content to learn and how to learn it with ease. It is there ubiquitously to assist the student. It functions like an extension of the student's intellect. The human and the machine under such circumstances have merged into a new being with an identity beyond that of a human.

This is the subject matter of the posthuman where the identity of being human has become perforated. It has become liquidified and cannot be located in one place only. The student as in the example above is in Europe, in Africa and the East, everywhere through the capabilities of AL. S/he can know and participate in discussions, in learning and any activity from anywhere. Time and space no longer have a hold on the human being. S/he cannot be arrested at any one level of academic performance. His/her ability to collaborate with other students, libraries, academics, or whomever are extend beyond imagination. His/her compassion is at its peak because s/he learns at his/her own pace and learns what s/he likes. His/her corporeality though seeming to be located in a defined space, his/her entire being is not. It is this new identity that Donna Haraway refers to as '*the cyborg'* (Haraway, 2016) in order to use a metaphor close to the science fiction's *bionic man* whose identity is in the interface between

human and machine, among the human and the non-human, as well as the climaxing of the animal-object-human historical development. The student referred to about above, is brought back to the initial reality of being one with it (reality). S/he just a cog in this huge universal machine. Differentials in terms of any marker, real or imagined like gender, race, socio-economic status, religious, etc. do not matter as all are one. This conception extends even beyond the African notion of the 'I' which is assumed to be built, couched and dependent on others (Nwoye, 2017). The conventional 'I am because we are' is exponentially multiplied and multiple layered to include machine, computers, others, etc.

It is in the consideration of the above that this special issue helped unravel the nature learning environments in the context of the era of the posthuman. The notion of sustainability is related to UNESCO's 17 Sustainable Development Goals (SDGs) focusing on the economic development of all in an environmentally sustainable manner towards the social inclusion of all (United Nation Educational, Scientific and Cultural Organisation, UNESCO, 2017). The idea of learning environments refers to contexts where identities of students and academics as well as other stakeholders in education are created and restructured accordingly across disciplines towards borderless curriculum where various nations learn from one another to improve humanity.

In this special issue, Bunmi Isaiah Omodan contributed an article entitled *Analysis of connectivism as a tool for posthuman university classrooms.* He argued that in the posthuman era, teaching and learning through technologies are becoming increasingly important, most especially in the university system. Connectivism, a theory of learning that emphasises the importance of connections between people and information, is one of the most influential educational philosophies driving today's educational dynamism. In a posthuman world, where technology is constantly evolving and becoming more sophisticated, connectivism is argued to provide a framework for understanding how students learn and how can technology be used to facilitate learning. This study argues that connectivism is one of the ways in which classroom stakeholders can be made to prepare for the posthuman era. The study is located within the transformative paradigm to enable the researcher to tailor the argument toward transforming the university classrooms towards developing a new way of thinking about society's present social boundaries by pursuing truth within a postmodern framework. In the same vein, conceptual analysis was adopted to make sense of the argument since it helps to interoperate and dismantle complex and ambiguous concepts toward meaning-making. The analysis begins by presenting connectivism and its potential assumptions. The assumptions were juxtaposed with the posthuman agenda by arguing the relationship between posthumanism and connectivism and lastly, how it prepares classroom stakeholders for building students' capacity ahead of the emerging interaction between human (students) and non-human (technologies). The study concludes that connectivism viewpoint is one of the unavoidable philosophies of the future.

Siyabonga Alfa Zwane, and Patience Mudau made a contribution entitled *Student Teachers' Experiences of Open Distance e-Learning support in a Posthuman Era-A Learner Engagement Perspective.* In this paper they argue that online learning uses Information and Communication Technologies which rely on reliable connectivity. While this is a giant step to widen access in South African education as shown by a number of studies conducted already regarding online learning, less focus has been paid on rural students which are under-resourced. They are presumed to have access and support to online learning and assistive ICTs that make online learning possible. Therefore, the focus for this study was on KwaZulu-Natal rural student teachers' experiences of Open Distance e-Learning in a Posthuman era. The study focused on students' experiences regarding online support tools like discussion forum and others as tools for student engagement and support on 'university LMS' platform. The problem was investigated using a descriptive qualitative case study, which used individual interviews. The study involved fifteen (15) 'university name' student teachers from KZN and the findings revealed that, notwithstanding the countless challenges, students were very passionate about the use of online learning in Open Distance e-Learning and they showed a desire to engage more using different types of devices and platforms as they learn through social media and also showed that learning resides in technological appliances they use(Posthumanism), hence the study's conclusion and implications stress that the distance between the student and the institution, student and lecturer and student and other students can be mediated and reduced through proper student support services.

Contributing to the posthuman discussion, Bekithemba Dube and Elizabeth Campbell wrote an article entitled *Borderless Curriculum in the Post-Human Era: Reflections on the United States of America and South African Initial Teacher Pedagogical Practices*. In this article they interrogated the opportunities and challenges of a borderless curriculum as the alternative to reimagine a better future premised on initial teacher education. The paper comes against the background that curriculum projects remain nationalised, depriving learners and educators of an opportunity to learn from the best educational practices outside their borders. The paper is located in posthumanism, where a borderless curriculum through technology can be positioned to respond positively to human tragedies such as war, systematic racism, human trafficking and conflict. Borderless curriculum involves unlearning in order to learn by harvesting best practices across borders to reimagine a comprehensive initial teacher education that addresses the lived realities of the learners globally. The paper argues that the posthuman era provides a platform for nations to share knowledge in the virtual and blended space to deconstruct prejudices while evoking living and working together across curriculum and spaces to improve initial teacher education.

Maria Tsakeni wrote an article entitled *Primary Preservice Science Teachers' Perceptions of Practical Work in Remote Learning Environments*. She makes an argument that Science practical work is renowned for providing authentic environments for science learning in ways that reduce the abstractness of concepts. Significant resources are used to provide facilities such

as laboratories to ensure that practical work is implemented in science learning. Practical work is important for primary science preservice teachers who in turn will implement the instructional strategy in their future classrooms. The rise in remote learning prompts researchers and instructors to reimagine ways of facilitating practical work in ways that involve human-machine interactions in significant ways. This study used an interpretive paradigm and an explorative single case study design to explore primary preservice science teachers' perceptions of conducting practical work in remote learning environments. A framework based on the internet of things enabled tools was used to mediate the understanding of the findings of the study. Data were collected from twenty-five preservice teachers by means of experiment reports and observation of practical work activities. The findings of the study show that in the absence of proper systems for conducting practical work remotely and limited internet connectivity, the preservice teachers used internet searches to inform them of how to conduct experiments using household materials. The experiment reports comprised experiment demonstrations developed through the use of video-making applications, cloud computing tools, and social media collaborations. The study makes recommendations to expand the preservice teachers' technological competencies to include the use of virtual laboratories to conduct practical work in remote learning environments.

In advancing the special issue, Motlalepule Ruth Mampane contributed an article entitled *Perceptions of academic resilience by senior phase learners and teachers from low socioeconomic schools.* She makes an argument that in low socioeconomic township schools. Learners from township schools experience many risk factors that can impede their academic success and careers. A lack of resources is one of the risk factors experienced by the learners. During COVID-19, where an online or hybrid learning model was relied on for teaching and learning, most township schools relied instead on the rotational learning model. The study's main aim is to evaluate and understand the learners' perceptions of their academic strengths, future aspirations and motivation and to compare their perceptions with those that emerged from their teachers' blind evaluations. The participants were teachers (n=8) and learners (n=12) from two purposively sampled township secondary schools. Data generation instruments included semi-structured interviews for learners and a self-constructed Likert-type scale questionnaire for teachers. Content analysis was used to analyse the data. The findings suggest that risk factors to academic resilience exist within the family environment and the school environment, and lack of parental support and school security, poor teacher-learner relationship and unemployment were frequently mentioned. However, factors that can enhance academic resilience were also identified within the family, school and community. Risks and protective factors affecting learners' immediate threats and needs were identified. Access to technology and the need for technological advances were not identified as resources or risks. Future research should examine the relationship between resilience, academic resilience, career aspirations, and technology's role in education using qualitative and quantitative research methodologies

Pulane Adelaide Molomo contributed an article entitled *Renewal in Educational Spaces as a Relational Aspect: Making Way for a New Culture of Reasoning Innovation and Sustainability.* She makes an argument that *e*ducational spaces have long been standing on repressive, non-relational and detached conditions that dealt a blow to the geo-political, socio-economic, and environmental balance. The paper reports on the effectiveness of educational spaces when dominated by an ethical relationship between human and nonhuman elements as a collaborative measure to solve earthly problems. The purpose was to highlight the role of education in producing innovative, honest, and critical thinkers who can apply knowledge to navigate relational intricacies. Qualitative data were generated from literature and a purposively sampled respondent group of eight lecturers and twelve students in one of the universities using interviews and focused group discussions. Data were categorised and analysed into themes. It was found that a pedagogical encounter which enabled students to engage in activities that deepened their knowledge of how the world works in totality gave them opportunities to understand the balancing effect of relational aspects when solving problems. This study proposes a renewal and a mind shift toward understanding relational interaction brought by scientific and technological advancements that impact human and nonhuman agents. The implication is that the world needs people to become innovators, think holistically and build a synergy between things and humanity. The study proposes that educational spaces should develop consciousness and ethical behaviour to sustain the relationship between human and nonhuman agents, which has implications for innovation and new practices that will sustain the world.

Margaret Malewaneng Maja looking at language angle wrote an article *entitled Teachers' perceptions of integrating technology in rural primary schools to enhance the teaching of English first additional language* argued that teachers' perceptions of integrating technology in rural primary schools play a substantial role in the Intermediate Phase (grades 4 to 6) in enhancing the teaching of English first additional language (EFAL). However, in a country such as South Africa, teachers experience barriers such as time constraints, load-shedding, a lack of facilities and a lack of digital skills which challenges the incorporation of technology in language lessons in this posthumanism era. This study explored teachers' perceptions of integrating technology in EFAL classes in rural primary schools in Limpopo, South Africa. There are several studies on how teachers feel about using technology in secondary schools and higher education, but only a few have concentrated on rural primary schools specifically the Intermediate Phase. Therefore, this area deserves further investigation to add to empirical data. An interpretivist paradigm guided this study informed by the technology acceptance model (TAM). An exploratory qualitative case study used semi-structured interviews for data gathering. Ten Intermediate Phase EFAL teachers were selected with the help of purposeful sampling. Using thematic analysis, the obtained data were categorized into codes and themes. It was found that teachers are willing to use technology to teach EFAL as it has revolutionized their teaching and appreciated its productivity in their teaching activities. It is advised that EFAL teachers receive

in-service training on integrating technology into EFAL teaching. The acquired skills from the training may assist in time management and how to cope working with limited resources.

Motshidisi Anna Lekhu in article entitled *Pre-Service Science Teachers' Preparedness for Classroom Teaching: Exploring Aspects of Self-Efficacy and Pedagogical Content Knowledge for Sustainable Learning Environments* made an argument South Africa's current education reform seeks to foster high standards for teaching and learning. Such standards are intended to create a fundamental shift in what learners learn and how they are taught. Noting the technological reconfiguration of humanity and advancement, schools have an important role in preparing learners for the fourth industrial revolution (4IR) with key skills and values which include creativity, innovation, critical thinking and problem solving. Consequently, through initial teacher training (ITE) programmes, sustainable learning environments (SLEs) should be created and enhanced, where teachers are prepared to embrace posthuman pedagogy to teach confidently with and about 4IR. In pursuit of this objective, this case study investigated preservice science teachers' level of preparedness and their science teaching efficacy beliefs to teach in SLEs. The findings revealed that teaching science does not only require knowledge of the content, but also an understanding of how to teach the content; that is, pedagogical content knowledge. Furthermore, with the emergence of the 4IR, education programmes need to be responsive to the socio-economic needs and produce graduates who will meet the challenges of the 21st century. As aspiring agents of change, the participants' philosophy of teaching aims to promote learning-centeredness to enhance SLEs where quality teaching will be prioritised. Without proper training, support and resources, this aspiration will remain a mirage. Maintaining responsive classrooms will thus be a challenge that continues to be an albatross to social change to the detriment of the entire society. This paper has implications for ITE programmes, which impact on the school curriculum and educational transformation.

Mahlape Victoria Mokone, and Wendy Setlalentoa made a contribution entitled *Enhancing self-efficacy of beginner teachers in the use of e-portfolio: The role of a mentor teacher.* They argue that the term beginning teacher is describes as those individuals who have less than 1 to 3 years in a teaching profession and or individuals who are entering the teaching profession directly from university. There seem to be a need for a beginner teacher in their first year of teaching to have a mentor teacher that will assist them to improve their self-efficacy so that they can be able to achieve quality teaching and learning in any learning environment. Recent studies have shown that there is growing concern with beginner teachers' self-efficacy on how to deal and cope with the realities of teaching in the modern classroom. A mentor teacher is someone who has been there, done that and learned from experience and willing to share. The aim of this study was to investigate how the use of e-portfolio may enhance beginner teacher's self-efficacy with support from their mentor teachers. The beginner teachers are faced with challenges in their first years of teaching; hence they need mentoring, support to improve their self-efficacy. An e-portfolio might be one of the tools that can assist in monitoring and evaluating the professional activity of the beginner teachers, their achievements and develop

them. E-portfolio provides openness and transparency when mentoring the teachers. Qualitative data were collected through focus group discussions with fifty-six (56) randomly selected Post Graduate Certificate in Education (PGCE) students at a university of technology and thematic analysis was employed. The findings of this study indicated that beginner teachers need guidance and support from their mentor teachers for them to transform and build their self- efficacy positively and improve in their use of e-portfolio. The study recommends that induction support be used as an approach to improve novice teachers' self- efficacy and improve their teaching performance in the use of e-portfolio.

Nevhudoli Nyadzani Dolphus, Vhonani Olive Netshandama contributed an article entitled *What do Bachelor of Indigenous Knowledge Systems graduates say about their curriculum? A qualitative Tracer study at the University of Venda.* They noted that the main purpose of any degree, in any institution of higher learning is to produce graduates with competent skills and knowledge to deal with vital challenges that affect the country. A qualitative reflective semi-structured interviews were held with 12 graduates to ascertain their experiences with the Bachelor of Indigenous Knowledge System (BIKS) programme delivery and content during their 4 years stay at the University of Venda. Responses from graduates indicated that the strength of the BIKS lies within its multidisciplinary approach. The relevance and the responsiveness of the curriculum were said to be based on the fact that students were encouraged to do research about contemporary issues that relate to IKS. It also exposed the graduates to the work environment through integrated learning program, although, there were also sentiments that such exposure is insufficient and at times irrelevant; this limited their exposure to employability values, knowledge, and skills, therefore there is a need for curriculum transformation. The experience of the students provided insights into what could be the focus of the revision of the curriculum to ensure employability and or entrepreneurial acumen amongst graduates. One of the challenges of IKS, that the students drew attention to was a lack of the curriculum's capacity to beneficiate as it was not sufficiently business-oriented in the current focus. Work-based learning and other forms of exposure might have to be revamped to ensure that students learn how to position themselves within existing businesses or create thriving businesses within the IKS space, so that they can create employment opportunities as well.

An article by Grey Magaiza, and Shadreck Muchaku entitled *Curriculum enablement and posthumanism: Pathways for creating and implementing a community development curriculum* argued that the application of disciplinary transcends as a lens for critical inquiry and curriculum enablement is urgent in a posthuman era. The paper asserts that curriculum must be responsive to societal needs by providing students with a "toolbox" for the evolution of functional and productive societies. The community development degree is pedagogically premised on utilising multiple disciplinary synergies primed for analytically and practically improving the human condition. The article uses critical terms in posthumanism, such as relationality, resilience, and sustainable communities, to evoke a return to the local by analyzing the creation and implementation of a responsive community development curriculum. Through pedagogical

approaches that infuse collaborative and cooperative learning with active learning strategies, we argue that the community development curriculum is structured to enhance the capabilities of students to assist communities in adapting and transcending to transformation. This paper followed a systematic literature review of journal articles extracted from SCOPUS, Web of Science, ScienceDirect, and Webscohost electronic databases. A final sample of 140 pieces was reviewed, analysed, and presented using ATLAS.ti flow chart diagrams. The study's findings revealed that Posthumanism inspired transformation has increasingly led to the erosion of social capital, deindividualization, increased technological mediation, and increased risk and vulnerability. Using an analytical lens of curriculum enablement, this present study further interrogates how creating and implementing a community development degree may provide alternative conceptualizations of posthumanism.

Another article which made contribution to this special issue was authored by Eurika Jansen van *Vuuren entitled Early Childhood in the Era of Post-humanism: Lending an Ear to Nature* contended that children are presented with technology as baby sitters even before they can speak properly and this has deafened them to the sounds of nature. Sounds of man and machine are the only sound most children will be exposed to due to living in cities with little natural spaces. Children are not taken into nature to experience and get to know the sounds of the bionetwork of which they are an integrated part. Rural children have a better chance to get to know, respect and cherish nature, due to their context, but their guides - parents and/or communities - have sunken into their own disregard of nature. It is only when children are taught to listen to, and appreciate nature, that they will start moving back to being 'mensch' where the focus ironically moves away from the human and focusses on creating an equilibrium between human and nature, rather than stripping our planet of its natural resources through abusive practices. This empirical research explored the literature to highlight the significance of listening, as a mode of developing appreciation of, and care for nature. Getting children of the post humanist era, attuned to their natural environment through *listening,* will assist them to understand their function as part of nature, and assist in the turnaround to restoration of our planet.

Richard Nyika and Alfred Modise Motalenyane made a special contribution with a titled *A Reflection on Implementation of Posthumanist Pedagogy in Polytechnics in Zimbabwe During COVID 19 Era.* Presenting posthumanism argument from Zimbabwean space, contended that Covid 19 induced lockdown resulted in closure of learning institutions and subsequent intermittent college attendance as a way of preventing the spread of the various. In Zimbabwe the Ministry of Higher and Tertiary Education, Innovation Science and Technology Development instructed tertiary institutions to adopt online learning in addition to face-to-face learning as a way of ensuring that learning continued during covid 19 restrictions. There was a shift from the exclusive humanist education where humans have been believed to the only agentic actors in the teaching learning process to posthumanist education where technology was used as a tool for learning. This study explored the organizational preparedness of TVET institutions to take on

board posthuman pedagogy when online learning was blended with faced to face learning. This was a qualitative study which used observations and in-depth interviews to collect data on institutional preparedness of two randomly sampled TVET institutions to embrace posthumanist education. Ten randomly sampled lecturers were interviewed to elicit their views and experiences of implementing blended learning which was largely ingrained in posthuman pedagogy. Observation was made on suitability of technological infrastructure to support blended learning. Ten randomly selected students from each institution participated in focus group discussions to elicit organisational preparedness of institutions for blended learning. Results showed that the institutions were not ready for blended learning. Lecturers and students were not capacited to use online technologies. The infrastructure to drive online learning was inadequate. Inadequacy internet infrastructure militated against their understanding and acceptance of online learning.

REFERENCES

Chong, Y. S., & Quek, A. H. (2022). Navigating the Contemporary Rites of Passage: A Typology of STEM Professional Identity Transition. *Research in Social Sciences and Technology*, *7*(3), 86-100. https://doi.org/10.46303/ressat.2022.19

Dube, B., Makura, A., Modise, A., & Tarman, B. (2022). COVID-19 and the Quest for Reconfiguration of Disciplines: Unpacking New Directions. *Journal of Culture and Values in Education*, *5*(1), i-viii. https://doi.org/10.46303/jcve.2002.12

Haraway, D. (2006). A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late 20th Century. In: Weiss, J., Nolan, J., Hunsinger, J., Trifonas, P. (eds). *The International Handbook of Virtual Learning Environments* (pp. 117–158). Springer. https://doi.org/10.1007/978-1-4020-3803-7_4

Kalimullina, O., Tarman, B. & Stepanova, I. (2021). Education in the Context of Digitalization and Culture: Evolution of the Teacher's Role, Pre-pandemic Overview. *Journal of Ethnic and Cultural Studies*, *8*(1), 226-238. http://dx.doi.org/10.29333/ejecs/629

Nwoye, A. (2017). An Africentric theory of human personhood. *Psychology in Society*, (54), 42-66. https://dx.doi.org/10.17159/2309-8708/2017/n54a4

Sevnarayan, K. (2022). A Trajectory towards a Culture of Quality: A Phenomenological Study of an Open Distance Learning University in South Africa and in China. *Research in Social Sciences and Technology*, *7*(3), 49-64. https://doi.org/10.46303/ressat.2022.16Tarman, B. (2020). Editorial: Reflecting in the shade of pandemic. *Research in Social Sciences and Technology*, *5*(2), i-iv. https://doi.org/10.46303/ressat.05.02.ed

United Nation Educational, Scientific and Cultural Organisation, UNESCO, (2017). *UNESCO moving forward the 2030 Agenda for Sustainable Development*. Available at chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://en.unesco.org/creativity/sites/creativity/files/247785en.pdf