

Editorial: Re-envisioning African Higher Education: Alternative Paradigms, Emerging Trends and New Directions

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In recent years, higher education in Africa has emerged as a critical link to economic development, political agendas, social desires, national reconstruction moves and social justice imperatives. As the second largest continent on earth, and home to more than a billion people, Africa comprises 55 recognised countries, with a multitude of languages, cultures, belief systems and mores. Its major problems are the negative perceptions regarding iniquities, disease, under-development and poor governance structures. Somewhat relegated to the periphery, are the tangibles the continent can offer as the reservoir of immense natural resources, human capacity and potential.

Re-envisioning Africa in positive ways means that higher education needs to be conscripted towards the services of the continent by providing the intellectual guidance, knowledge and skills to catalyse the immanent potential. Higher education, from this perspective, has to shape, plan, design and produce human capital and knowledges that are relevant to Africa. This is no mean feat as the frontlines of the battles African higher education has to engage are at least, two-fold in nature: one, a commitment to the internal imperatives of Africa and two, engaging with the hegemony of northern epistemology, ontology, axiology, ethics, and validity measures. In other words, higher education has to be the imaginative source of alternative paradigms, new trends and directions.

Seeking alternative paradigms, we argue, has a starting point and that is to take ownership of knowledge production, for legitimacy and respect. For example, higher education institutions in Africa have been around for

centuries. The earliest, the University of Al-Karaouine, in Morocco, established in 859AD, continues to offer programmes and to confer degrees. Despite a long and strong lineage debates about its authenticity as a ‘university’ are unabated and for many it is considered to be ‘madrasa’, (Makdisi 1970), opting instead to recognise the University of Bologna as the oldest university in the world. The conflict was settled somewhat by the recognition of both UNESCO and The Guinness Book of World records which granted the University of Al-Karaouine status as the oldest University in the world. But, depending on one’s worldview, there is no consensus. Official recognition, we know, cannot harmonise doxa, ideological stance or politicised overtures as these are characteristic of paradigmatic influences. Paradigms are not neutral, or natural. They organise, operationalise and obligate subservience. It was Thomas Kuhn (1970) who revealed the hidden mechanisms that influence research, its relevance and reception. The generation of alternative paradigms must, therefore, be taken seriously if Africa is to make its foray onto the world’s centre stage as a force and a source of future trends.

What we can and have to do is to produce, through our research endeavours in our journals and elsewhere, the creative and productive alternative narratives of Africa. The series of papers this special edition offers is a contribution towards that agenda. The papers reflect the conscious and concerted efforts made by researchers to use the spaces of knowledge transfer, production and reproduction in novel ways that are useful for Africa and beyond. Indigenous knowledge and language development, improving teaching, making learning relevant, the induction of new academics, supervision, improving quality, curriculum restructuring and musings, STEM studies and contextual complexities are some of the issues grappled with in this compendium.

Language is the focus of the first paper. The imperative to reconsider the role of language in the context of both regionalization and internationalization in Africa is gaining currency as a crucial driver for higher education development (Hornberger 2007; Phillipson 1992). Academics are now under obligation to challenge processes and established practices that ‘normalize’ the use of certain languages while according marginal status others either as lingua franca or as languages of instruction. Terminology development for a scientific discipline is an essential prerequisite for education in the chosen language. In this regard the disciplines of Computer

Science and Information Technology are alleged to be lagging behind especially as they relate to the many non-English languages on the African continent. Disciplinary variations in terminology continue to impact the quality and stability as constructions are determined by who is consulted and how the process unfolds.

As the basis of their article, Keet and Barbour evaluated the veracity of terminology development with a simple hypothesis: *A resultant terminology in an evolving scientific discipline will differ depending on whom you ask, and how.* Through three experiments: an experts-only workshop, two online surveys, and voting on computer literacy terms, they obtained what is arguably the longest existing list consisting of 233 terms for 146 entities. They contend that there are notable differences in preferred terms between experts and computer literate users, and while the passive voting yielded quicker results than the surveys, some entities still have many different isiZulu terms. Keet & Barbour's findings are noteworthy: to ensure rigour and legitimacy of terminology development, the process and product should, of necessity, be broadly participatory and inclusive from the harvesting stage. Yielding multiple contenders for an entity should be a compulsory and explicit before, and possibly also during multidisciplinary terminology development workshops. This democratisation of the terminology development process transcends the insularity and purism which characterises traditional laboratory approaches to development.

Part of shifting from the known, traditional paradigms to alternative ones pertains also to the recognition of African languages as carrying value for the purposes of teaching and generating new knowledge. Nkosi, Ntuli and Ngobo's paper is, therefore, another crucial contribution to this special issue. In their paper, which primarily seeks to highlight the experiences of academics in supervising research in the medium of isiZulu as well as these academics' thoughts about disseminating knowledge in isiZulu, Nkosi *et al.* show the possibilities that isiZulu offers both in the creation of new knowledge, as well as in improving the quality of supervision. The authors found that academics who were supervising research in isiZulu had positive experiences because it forced them to read scholarly method and theory books in order to support their students in their development. These scholars conclude that 'research produced in English is technically not better than research produced in isiZulu because the same materials are used' (8). Apart from these benefits, the interviewed supervisors cited improved writing skills

from students, as they were able to write in their mother tongues, as well as success in student graduation rates as students were doing their work in their home languages. However, while there are all these benefits to supervising in isiZulu, the authors make it clear that exploring alternative, marginal paradigms is not a simple pursuit: the dominance of English in academia makes it difficult for research in African languages to be given serious recognition. The authors show that while there is a willingness and commitment among academics to disseminate knowledge in isiZulu, there exists limited opportunities, be it in the form of conferences or journals, to enable this to happen. The paper concludes by maintaining that academics should insist on publishing their research in isiZulu so as to develop the language while also contributing to new scholarship.

Improving teaching and learning in deep and substantive ways is at the heart of contemporary higher education, more so in Africa where student preparedness for higher education, success and throughput are unsustainably low in relation to comparator nations (see Dhunpath & Vithal 2012). The past decade has witnessed a drastic change in the way universities are structured and financed. Globally, governments are investing less and less in higher education, leading to emerging private sector-funded universities, and an increasing number of privately-funded students in public universities. While this development has widened university education opportunities, it has pedagogical implications. Class sizes have increased, and diverse student populations with varied learning abilities, cultural capitals, social class, and linguistic variations are accessing higher education. Whereas the brightest and most committed students are still admitted as was the case in the past, alongside these are students with neither strong learning abilities nor strong academic backgrounds. There are, consequently, demands on the university teacher to respond innovatively and responsively in terms of teaching approaches. Three papers are instructive in this respect.

The first by Ansurie Pillay, theorises some surprising findings that emerged from a participatory action research study. Working with students for whom English is a second or third language (a common situation across Africa), the study acknowledged the lack of cultural capital for success in higher education. The innovative strategy here was recasting the 'lack' as an opportunity to retrieve from the students their own cultural assets to create a nurturing learning environment. Together students and lecturer chose literary texts, discussed the importance of reading, academic prowess and

empowerment. The turn to an alternative source of cultural capital and to reflexive and responsive pedagogical engagement resulted in effective teaching, engaged learning and competency in academic literacy.

The second by Jayaluxmi Naidoo, relates to the experiences of postgraduate students' use of technology as a tool for mathematics teachers. Teaching mathematics in traditional ways has limitations, the most serious being the marked underperformance as evidenced by performance in benchmarked tests. Technology, it appears may have a critical role to play in reversing the trend of underperformance. Naidoo's study found that teachers valued the use of technology, supported multiple assessment methods and that they also desired platforms outside the bounds of official policy structures like conferences where teaching practices could be shared and the for professional bodies to shift the gaze to academic matters. Though not engaged with in the paper, the hidden discourse one can infer is that there are teachers who realise the lost opportunities to reverse declining mathematics outcomes by those who possess the power to do so.

The third in this thematic trilogy is written by Sarah Bansilal. This study focuses on the study of number patterns, and more importantly, converting the patterns into mathematical symbols, as abstract algebraic equations. The importance of this study against the backdrop of poor mathematics competency as already mentioned previously should not be underestimated. Shifting gears to higher, abstract levels in the training of future teachers is yet another attempt on the part of higher education to contribute to responding to national imperatives. The study revealed different strategies used by the students to no avail. The students were unable to generate terms of the sequences which contained repeating cycles and also struggled to generate a description of the general term of such sequences. Bansilal provides mathematics teachers with vital insights about which aspects of the curriculum teachers-to-be find most challenging.

Taken together the three papers suggest that higher education is obligated to factor - in context, cultural capital, and pre-university education as a responsive pathway for successful teaching and learning in Africa.

Teaching and learning responses are not sufficient in themselves. Serious en-visioning mandates a critical re-evaluation of curricula in higher education. This edition offers two such possibilities: an imagined curriculum and a critical assessment of the implications of proposals to lengthen undergraduate qualifications by an additional year.

The Amin and Campbell article, based on the experiences of health-care workers in rural parts of South Africa, offers an imagined curriculum for palliative care and its impact on patient care. Palliative care is a medical intervention for a patient facing death due to an incurable disease, or poor health prognosis. In Africa, it is often undertaken by volunteers with little or no medical training. The training of the volunteers is a concern as it is influenced by a body of knowledge established in the North which excludes patients' spiritual beliefs and cultural values in respect of healthcare, dying and death. A curriculum, reconceptualised through a post-structural lens, Campbell and Amin argue, will not only respond to the needs of patients and caregivers, it is also a more resilient means to capture the simultaneous, yet different realities within the same context or across multiple contexts. The paper is novel in terms of its interdisciplinary approach, with the work of medical caregivers being bolstered by educational theory and practice. The Amin and Campbell paper is a stark reminder that content knowledge and context knowledge are of importance in equal measure.

By contrast, the Rawatlal and Dhunpath article questions the logic of extending the undergraduate programmes by a year. Furthermore, they critique the notion of an 'irreducible core' in any curriculum. In fact, the powerhouse of the North's hegemony of how, what and why we teach and learn, located within that core, is of great concern, considering the multiplicity and diversity of transnational contexts. An African perspective should destabilise the core as it is epistemologically tainted and the authors take pains to do so. They logically unpack the flawed assumptions and inferences made by the South African Council on Higher Education, making apparent the potential hazards of these flawed assumptions – if they are to inform policy decisions. Deploying a range of scenarios they reveal that a temporal response will perpetuate a pedagogy that fails to transcend remediation motives. Instead, Rawatlal and Dhunpath advance an alternative approach, drawing from the field of Artificial Intelligence and by advocating for smarter rearrangements of curricula and time-tables to optimise learning.

In an era of endless quests for working smarter, the lecture method has to be complemented by new age technologies. Teachers in higher education will need to develop critical and reflexive approaches to teaching and learning underpinned by relevant theory and practice, scholarship and research. Alternative instructional strategies and paradigms will need to be embraced for successful outcomes. For example, Wood and Maistry in their

thesis on higher education accounting pedagogy argue that qualitative studies of accounting pedagogy are rare in South Africa. The larger study from which their paper is drawn explored the pedagogy of Managerial Accounting and Finance lecturers at the University of KwaZulu-Natal (UKZN). One of the significant influences upon the participants' pedagogy was the curriculum and assessment requirements of the South African Institute of Chartered Accountants (SAICA), the regulatory professional association. Using a qualitative case-study research design, conventional and video-stimulated reflection (VSR) interviews as well as lecture and tutorial observations, Wood and Maistry analyse the influence exerted upon pedagogues by SAICA.

Contrary to the learner-centred teaching approach advocated by SAICA, they found that the participants' pedagogy was in practice, teacher-centred. They argue that this slippage may be explained by their restricted pedagogical knowledge arising from inadequate teacher education and deficiencies in continuing professional development. A significant contribution to research curriculum is the video-stimulated reflection (VSR) approach which proved to be a powerful means of prompting critical reflection from the participants and diagnosing inadequacies requiring continuing professional development. Wood and Maistry conclude that SAICA's curriculum and assessment requirements, given the participants' inadequate teacher training and development, were a pervasive constraining influence on their pedagogy. In particular, pedagogues' preoccupation with preparing students for SAICA's examinations was of concern and warrants further research.

The concern with quality promotions and quality assurance is intrinsic to any discussion on curriculum and pedagogy. Improvement' and 'maintenance' of quality in higher education have become buzzwords in the global higher education discourse in both emerging and mature economies as schools and universities make efforts to produce students of international calibre. At the institutional and national level, these attempts include internal and external quality assurance of education programmes and institutions which often leads to institutions and education programmes acquiring or losing their accreditation status. Sosibo argues in her paper that although internal and external review systems have been in place in South Africa for a number of years, not many institutions have reflected on how they impact on the quality of education. In her study, eight academics reflected on these

reviews, with the goal of determining which review had more impact than the other in maintaining quality in education. Because there were a greater number of limitations identified in external reviews than there were in internal reviews, Sosibo infers that academics appear to value and support the latter. Sosibo concludes on the basis evidence she has generated that internal reviews should be strengthened and conducted regularly in order to raise quality in higher education.

The idea of power, struggle and the transformation of structures cannot be excluded from the debates of higher education in Africa. Whitehead and Moosa's paper on the experiences of new academics, especially from previously marginalised groups, in South African higher education spaces narrates such encounters. Recognising that South Africa remains an important site for which to understand how transformation and change are engaged by universities (Soudien 2011), Whitehead and Moosa present a timely review addressing the challenges faced by new academics as well as those who come from marginalised groups. This is an important area of work which is proving to be quite tricky for many institutions across the country, with the University of Cape Town for instance recently facing some of the harshest criticisms on its policies of integration and promotion of Black academics within the institution.

Whitehead and Moosa understand very well that transformation must be accompanied by quality. Therefore, the authors explore the structural factors that prevent new academics from succeeding. Among these are the difficulties in transition from student to staff, as well as the problem of unsupportive institutional and academic cultures and discourses. The paper also highlights the marginalisation that black, women and working class academics experience in HEIs. For Whitehead and Moosa, as part of reinvisioning higher education in South Africa, new academics must be inducted into academic life as this would socialise them to the institutional cultures. Duties that the academics must perform must also be clear. This would in effect, the authors argue, require non-hierarchical mentoring models which would enable new academics to get exposed to existing networks—which are critical for the progress of new academics in HEIs.

It is now a truism that postgraduate supervision is a complex and demanding pedagogic practice, which goes beyond research and disciplinary expertise on the part of the supervisor demanding high levels of disciplinary knowledge and, equally, high levels of psycho-social maturity for both

supervisors and students (Ali & Kohun 2006). This is true of post-graduate supervision in general but perhaps of greater relevance to doctoral supervision where the delicacy of the supervisory relationship predisposes the relationship to conflict and contestation (Spooner *et.al.* 2007). Considering that a limitation of traditional systems of doctoral research training is the master/apprentice supervisory model, Rawlinson and Pillay question whether different genres of research, such as self-study, add to the complexity of a supervision relationship, where the support process between supervisor and student changes the practitioner and her situation.

By adopting a reflexive stance in a self-study supervision relationship, Rawlinson and Pillay engage in the process of self-scrutiny and tenuous knowing of their positions and the shifting nature of these positions as illuminated through particular moments in the self-study doctoral project. Drawing on excerpts from supervisory meeting conversations they co-write their struggles relating to what they describe as ‘fixed positionings, dis-positionings, and repositionings’ all of which are necessary for reframing the supervision relationship as an ethically and aesthetically caring practice. They conclude that the mutually reflexive process undertaken through writing foregrounds powerful, complex moments that happen as spaces: ‘potential, transitional, creative’ in a dialogical self-study supervision relationship, which left unattended may have negative consequences for the self-study researcher and the self-study research project as a whole.

The problem of access to higher education has been overshadowed by the realisation that administrative access does not guarantee or enable epistemological access which predisposes students to success or failure. Regrettably, many in the academy continue to relinquish their responsibility for providing epistemological access, playing the perennial blame-game and shifting responsibility to schooling (see Dhunpath & Vithal 2012). Indeed, Higher Education Institutions (HEIs) do require benchmarks for selecting students and the National Senior Certificate results continue to be an important indicator for entry into such institutions. A range of papers dealing with aspects connected to success or failure are offered here.

Stears and James compared first year students’ Grade 12 performance with the results obtained in a first-year biology module at a tertiary institution. They used a number of strategies to determine if there was a significant difference in performance between the Grade 12 results and results obtained in the biology module, including the comparison of student

competences with competences stipulated in the Department of Education National Curriculum Statement for Life Sciences. The results showed that the significant difference between Grade 12 results and the performance in the biology module may be explained by the fact that students demonstrate knowledge and skills that are below those stipulated in the policy documents. Furthermore, students' experiences of learning at a tertiary institution are significantly different to their schooling experiences. Students' experiential differences have implications for further study at HEIs and require interventions by such institutions to ensure a smooth transition from school to tertiary education. Similarly, Siyepu and Ralarala's paper offers insights about first-year students learning. They investigated first year chemical engineering students' learning of mathematical concepts. By exploring students' interpretations and misinterpretations in their learning of mathematical differentiation, the authors concluded that early identification of students' misinterpretations of concepts is essential for their success in HEI. In this paper they chose not to focus on prior learning; instead they make the case for a critical re-evaluation of the lecturing modes and the roles of assessment.

The two concluding articles revisit two contentious and politicised issues in Africa: indigenous knowledge systems and sexual and gender diversity issues. Nadaraj Govender's study is tinged with optimism for the insertion of African knowledge systems as an alternative to the established status quo. The study explored the effects of an intervention strategy underpinned by argumentation theories. The findings suggest that argumentation discourses are an effective tool for inspiring students to incorporate local, cultural and indigenous experiences in addressing the science and social justice goals of education. This article must be placed within a larger context of efforts to legitimise African knowledge and to produce evidence of methods and methodologies of approaches that work.

Thabo Msibi's research analyses and theorises students' exam responses in a module concerned with empowering pre-service teachers to address homophobia in schools. Recent events on the continent advocating harsh punitive measures for those who stray from conservative sexuality norms, speak to the need to integrate sexuality politics in all segments of education. Teachers are essential in the fight against homophobia as they have access to and direct influence on those who attend school. Ensuring that the next generation is conscientised, future teachers have to be adequately

prepared to face and neutralise the dangerous discourses that circulate in public and private spaces. To that end, Msibi argues that it is neither sufficient nor acceptable to focus only on the influence over those we teach; instead he instigates a self-reflexive gaze to challenge ‘asexual teacher discourse’. Teachers, he argues, are sexualised beings and self-awareness is vital for change to be meaningful.

These papers provide a breathtaking landscape of the efforts being undertaken to confront higher education issues that matter to Africa. They do not pretend to be an exhaustive account, they, nevertheless, add substance to a burgeoning body of emerging alternative scholarship.

The cover: The cover image was painted by Fernando Vicente, a Spanish artist living in Madrid. His oeuvre consists of thematic sets drawn on printed materials combining his passions for topics on anatomy, mechanics, cyber punk culture and the human body with his collections of posters, maps and geographical anatomy texts. His latest exhibition, ‘Vanitas’, examines the human body, ‘without subterfuge, outside and inside, its fragility, is the mirror to look, in that we realise how fragile we are, and what we think. We all have the same viscera, arteries and muscle’ (Fernando Vicente 01 Dec 2014).

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