

# HBU Campuses and Universities of Technology: Dealing with the Apartheid Legacy for Equity and more Evenly Developed Higher Education Sector

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## ABSTRACT

**Purpose:** The main purpose of this paper is to shed a light on the South African university roadmap and make some contributions to the country, to its students and to the vast range of industries that it services, locally and internationally. The scientific and academic achievements of universities in South Africa have been phenomenal, from outreach programs at universities, to high quality scientific areas, and to development and research, whether in social or the natural sciences. This article addresses the questions like what studies are offered at Historically Black Universities (HBUs) or what are now black campuses and remain so in terms of their student populations being predominantly African and deals with what is significant in the descriptions below is what is not offered at these universities. An attempt is made in this paper the structural division of institutions, historically white and black, developed, and under-developed, urban and rural, well-resourced and under-resourced, larger scale and smaller scale universities in South Africa. **Methodology:** To address the research questions sated above, this paper used the qualitative methodology where the information and the relevant literature collected from the internet sources and content analysis has been made. **Implications:** this research work deals with the work of academics and activists lies in the creation of multiple spaces for growth, such as in its labor laws, or in the construction of Sector Education Training Authorities (SETA's). On the other hand, the country remains on the edge of a precipice in relation to its disaffected (but optimistic) youth, its marginalized rural areas, and in its rife divisions between the poor and the wealthy. **Originality:** This paper contributes for the HB universities can use the framework to understand marginalized student communities in South Africa.

**Keywords:** *Historically Black Universities; marginalized student communities; South Africa, Technical Education; Bantu Education*

## INTRODUCTION:

The South African university roadmap has been hazardous to say the least, but it has also made some outstanding contributions to the country, to its students and to the vast range of industries that it services, locally and internationally. The scientific and academic achievements of universities in South Africa have been phenomenal, from outreach programs at universities, to high quality scientific areas, and to development and research, whether in social or the natural sciences. Yet at the same time, higher education in South Africa has been a highly contested terrain, both during apartheid and after 1994 when the first

general elections were held, as much as its 'autonomy is threatened', of 'infrastructural decay', 'falling academic standards,' 'politicization and privatization' that is global (Shrivastava and Shrivastava, 2014) South Africa's higher education system was one of the most contested sites of struggle during the battle against apartheid. And it continues to be so today—a battleground with multiple dimensions and levels of sophistication (Bawa A., 2012: 670).

The impact of apartheid on university made an indelible mark on the country's landscape of higher education and its institutional structures and operations. This is evident from its history of division of richly endowed and excellent (English and Afrikaans medium) 'white' universities for the white populations, and the more 'teaching oriented' Bantustan black universities (or black campuses, in the case of merged institutions) that were promoted to support the ethnically oriented homeland system of governments and a divided education system. While the country has shifted from such ethnic divisions, through the promulgation of a single Department of Higher Education in the country, the geography of the country remains somewhat locked into regional ethnic zones, due to its apartheid history, leaving the apartheid legacy intact, like a living ghost in our midst. Bawa (2012) cites the National Commission of Higher Education's (NCHE) pertinent findings: of the race and gender imbalances in academic and support structures; of only 16% of 18–24-year-olds having access to the system, and this was also racialized; and of a deeply fragmented system: historically white and black universities, Afrikaans, and English medium institutions, technikons, urban and rural universities. In a word, it was not one system of higher education. The white participation rate among 18-24 years-old, was at 60%, that is comparable to the developed world. At some institutions whites were a majority and at other institutions there were very few of them (i.e., at the historically black institutions). The rate for young South Africans was 13%, and with a skewed distribution of race at institutions, a massified system for whites existed but not for the majority black communities. Resources to higher education were also distributed in a skewed manner. Gender distribution has shifted between 1999 and 2009, from 49% males and 51% females to 44% males and 56% females (Bawa, 2012). So has the number of blacks at white universities changed of late.

Another problem is the disjuncture between the needs of a reconstructing, developing society and the existing knowledge project of the system, both in terms of learning/teaching and research, of which none have been addressed seriously. One structural flaw is the structural division of institutions, historically white and black, developed, and under-developed, urban and rural, well-resourced and under-resourced, larger scale and smaller scale universities, that still remain a part of that legacy, in some form or other, even if these classifications are quite wide and general and the landscape is changing after the country gained political liberation in 1994. The problems that HBUs face (particularly as it came down to black or mainly African student populated campuses), are not unique nor accidental. It is part of a wider set of structural problems that is the focus of the next section.

### **Historically Black Universities/campuses (HBUs) as part of the international division of labor:**

Such divisions are not South African peculiar. Rufus cites Lemelle (in Cantey, 2013) on the colleges in the USA:

....the College for Negroes has a double responsibility...(to)...prepare...youth for good lives as American citizens and...tackle...racial problems with intelligence and courage.

### **LITERATURE REVIEW:**

Cantey (2013) finds that this double responsibility of College for Negroes (historically black colleges and universities or HBCUs), as relevant now, as it was in 1936. This is especially so within the context of the continuous racial and gender inequalities during the Obama era in the USA. Of significance is that finance is seen to be crucial to produce excellence at universities.

For Joseph (2013) HBCUs in the USA have been supportive of black students in certain natural science fields, leading to their students advancing to study for PhDs, if they had done their undergraduate studies at an HBCU. This argument is justified by other forms of support, such as social and communal capital, among a host of support mechanisms at HBCU's.

There are differences though, between the USA and South Africa. One important difference is the existence of private HBCU's in USA, whereas South Africa does not have such support for the HBUs. Such support goes far back to Lincoln's Morrill Acts (1862, 1890) resulting in the emergence of quality public and private universities in the USA. The latter thus made much more strides in advancing its higher education structure, while South Africa chose the option of leaving the structural, economic, and social balance of

higher education to sort itself out, or to merge some and close other institutions, while the demand for access to higher education was growing in South Africa. In effect this left the higher education more or less intact in the form that it had been inherited from the apartheid legacy.

This historical error of the post-1994 government, in effect speaks volumes of the kinds of lack of growth in particular institutions in South Africa. In effect, the apartheid system was not dismantled in higher education, as reported by the Lewis/Craig report (Luescher, Mncwango and Keet, HSRC, 2023). Instead, HBUs were not given the opportunity to grow or diversify as the HBCUs in the USA did. While the historically black campuses in South Africa, particularly those in the rural areas, have not been supported, financially and otherwise, sufficiently enough to be what this thematic edition suggests, that is, to be places of intellectual work, and the roots of this are historical. This does not mean that such institutions do not achieve academically and otherwise, but there are pertinent indicators that will be cited below to indicate the lack of support that leads to their lack of performance. HBCUs in the USA afford graduates relatively superior long-run returns they continue to have a compelling educational justification, as the labor market outcomes of their graduates are superior to what they would have been had they graduated from a non-HBCU. This cannot be said to be the case in South Africa. In fact, ironically in terms of the aims of liberation, it's the opposite, although the picture is a bit more complex due to the merger scenarios (which in some cases is a euphemism for takeover, particularly if it is a HBU that merges with a HWU). These forms in effect whitewash HBU histories, their struggles, and their rightful structural placement in the social structure of society. This leads to the underlying problem of how a problem is misframed in higher education.

### **The 'misframing' of higher education in South Africa:**

In South Africa such progress has been stymied for various historical, institutional, and macro-societal reasons: thus, the second-largest black university in South Africa (Turfloop) has a proud history of student activism, which is also how it has continued to present itself to the world (FitzGerald in Oxlund, 2010). Yet it has remained similar in some of its management decisions as when Tiro dismantled the management there with his critique of Bantu Education and of the powers that be (Weekly Mail and Guardian, 2019). The current national educational policy remains problematic for historically black universities. This argument is supported by the following macro conditions that did not deal with institutional redress:

...the government... (shifted)... from pursuing institutional redress to social redress... in... the first years of democracy it... (looked to rehabilitate) the historically black institutions... (but)... later... shifted... focus... to... (increase)... black students as a measure of social redress (Oxlund, 2010).

This reverberates in another way in terms of what Heleta (2016) describes, that is the other side of the coin: since ending apartheid, most knowledge systems in South African remain Eurocentric, reinforcing western dominance and privilege, perpetuating epistemic violence.

Bozalek et. al. (2012) that also argues that higher education is 'mis-framed' (using Nancy Fraser's term) in S.A.:

(Inclusive) higher education... (is a global concern) ...(but)...South Africa (sees)...a disjuncture between policy...promoting...inclusivity and... (student and staff) experiences ...a focus on individual higher education institutions is...insufficient...for participatory parity in higher education...such...focus is...misframing and a form of injustice.

Bozalek et. al. (2012) then conclude as follows:

... racially informed policies influencing higher education in the apartheid era continue to impact on the sector in the current period, having devastating effects for certain people, while continuing to advantage other privileged groups of people.

It is in this context that Higher Education authorities merged the two inherited problems of apartheid, the Potchefstroom University of Christian Higher Education (PUCHE) with University of the North West (UNW) that were both products of the apartheid system: the one was impelled by a Bantustan dictator in Bophuthatswana (Mangope) and that was never autonomous from such political authority; and the other impelled by apartheid powers to create a university haven, with the Afrikaaner think tank, the Broederbond, based there. The organization is now called the Afrikaans 'HandelsInstitut' that was formed during world-war 2, as a business organization. Business in this case has replaced ideology of Afrikaner culture after the death of the Nationalist Party that was the home of most Afrikaners.

The established quality of the historically white universities in South African continues, even if they attempt to grapple with Africanizing themselves in various forms. The nub came in the form of students that had to take up the cudgels at some of these HWUs to point to their colonial conditions: some such

samples are the 'RhodesMustFall' or the FeesMustFall' movements that brings such a spate of issues, analysis, and interests to the fore, of which one central thrust is that of the decolonization of universities (Booyesen S., 2016)

In any case, the geo-political economy of the country remains tied to its past, even while the education system is unified in one Higher Education Department. Historically black campuses or universities and universities of technology in South Africa, particularly in the rural areas, remain the underlying problem to resolve in South Africa, if we are to deal with the problem of developing sustainable and quality institutions across the higher education spectrum. The background to the HBUs may assist in contextualizing the problem at hand, in terms of its broad histories.

## DISCUSSION AND ANALYSIS:

### Resistance and regression at HBUs:

Osfund corroborates this dual mode of resistance and regression at (and affected on) HBU's:

...*toyi-toyiing* at Turfloop must...be taken seriously as...embodied protest against the structural inequalities...marking...post-apartheid South Africa... (with) competition and performance (serving) to weaken...historically disadvantaged institutions... *toyi-toyiing* may be much more justified than South African educators and government officials are willing to admit (Oxlund, 2010).

This is in line with views that hold that past injustices, that have a real impact on institutions in terms of funds that have been used to invest in property and create economy of scales, and thus the push towards declonizing is important, for leveraging languages and culture and to incorporate cost effective technology, as Mampane, Omidir and Aluko (2019) argue. They posit glocal initiatives from the perspective of the youth, and to foreground indigenous knowledge and international world views. Such a vision cannot happen in a vacuum but must face the real and material circumstances of institutions and of students that cannot afford fees and living expenses.

Thus, while South Africa may have changed its political complexion, albeit be it in its early stages, its institutional complexes as a historical legacy remain. The language issue is one area where complexity is revealed by Makalela et. al. (2013): If universities are to be spaces for thinking, intellectual debate, and growth, then the limitations of monolingualism are obvious in the face of the diverse kinds of people, cultures, and languages that the country has within its borders. Makalela et al. (2013) found that monolingualism at universities remains predominantly in force in the new South African political dispensation, and this is particularly so at HBUs with English as the medium of instruction. Furthermore, language departments have shrunk after the rationalization of the higher education sector by the Higher Education Ministry. Osunkule (2006) has even cited the digital divide between the HBUs (and Universities of Technologies) and the historically white universities (HWU's), though some of this may somewhat been bridged since Osunkule's findings. While the South African Information and Communication Technology (ICT) capacity, development and its contribution in the field is quite phenomenal, as outlined by Botha and Groenewalt (2013), there are still glaring gaps in the system. This paper focusses on one other set of aspects, in relation to HBUs in the sections that follow hereunder: first, their curricula and what is offered or not offered at what were called HBU'; second, the research and development of such HBUs and Technikons, particularly in relation to what were HWUs, and finally to look at some policy options in the higher education sector.

### Curriculum deficits at HBUs and Universities of Technology in South Africa:

This brings us to the question of what studies are offered at HBUs or what are now black campuses and remain so in terms of their student populations being predominantly African. What is significant in the descriptions below is what is not offered at these universities (in contrast to what the land grant model did in the USA). The list below sums up the various offerings of particular historically black universities, in that these hard and soft sciences remain outside of their curriculum, and therefore to the overall development of their students, if the education oyster is to be exploited to its fullest extent, and for the development of the constantly changing demographics of the country and its ongoing and emerging diversity, whether culturally, population-wise or in terms of the various influences and tendencies that emerge from its diverse set of people that is in constant flux, due to the kinds migration that lead so such a socio-cultural context.

A small sample, that is focused on the rural African institutions, gives some indications of the limitations of such institutions in terms of their curriculum, and since the problem is structural, it is by no means that

those institutions have a deficit. Rather, it is a deficit of the system, and reflect the kinds of knowledge placement of such institutions as a matter of course.

**Fort Hare:** This university that is historically black is in the Eastern Cape where most of the generations of ANC leaders came from and has an alumnus from the African continent, was the first black university in the country, and has many faculties with various departments, and includes Fine Arts and Music but does not have a Drama Department, Engineering or Medical School. It saw a recent press coverage (2023) relating to the recent (2023) murder of the bodyguard of the Vice Chancellor (VC) to kill the latter. These events reflect the challenges faced there and has a sociology professor (Buhlungu) as its VC fearlessly taking on a local mafia that seems to have vested interests in university tenders. The university has of late remained mired in such high-risk politics as a current challenge apart from its challenges of being placed in a rural area that has its own particular challenges as do other HBUs, of the feeder market being rural schools that are highly under-resourced in many ways, of the distance of such campuses to the state, economy and (metro-) capital despite the national Department of Higher Education unifying the sector.

**Walter Sisulu University** has faculties in Engineering, and Environment, Information Technology, Management Administration, Sciences (Natural and other), Medicine and Health Sciences, Economic and Financial Sciences, Education but no Music Arts or Drama departments. The hospital in the area is a state of art hospital in the area, so it seems that the health sciences are being covered but not the fine arts. It is also highly challenged by its rural placement in the Eastern Cape, although it has acquired some hard sciences.

Limpopo University offers Health Care Sciences and Medicine, Humanities (Education, Social Sciences and Languages), Agriculture and Environmental Sciences (Agriculture, Mathematical and Computer Sciences, Molecular and Life Sciences, Physical and Mineral Sciences), Economics and Management, Accountancy, Law, and A Graduate School of Leadership, but no Fine Art, Drama or Engineering faculties or Departments. In 2022 some university buildings were torched when protests occurred there relating to a student accommodation crisis there. This is one, amongst a host of challenges that the campus faces.

University of Venda has Science, Engineering and Agriculture Faculty; A Humanities, Social Science and Education Faculty, a Faculty of Management, Commerce and Law, and a Faculty of Health Sciences, and while these are impressive in terms of their diversity for a university in the rural north of the country, it does not offer Fine Arts, Music, Drama or Medical sciences.

**Mahikeng campus** ('merged' into a new North-West University (NWU), with Potchefstroom and Vaal campuses). This campus has no Drama, Music, no Medicine, Dentistry or Engineering, but it has introduced Theology after the 'merger.' Fine Arts and Graphics were previously closed due to rationalization, its Business School has been transferred to Potchefstroom (barring one department, Public Administration). Its closer to being a satellite campus of NWU (<https://www-nwu.ac.za>). At one time (2019) it had over eighty disciplinary cases pending, and NEHAWU managed to take it off the table during what can be called a 'third Mahikeng siege' that was smaller and of a different nature, about which not much is written (as little as of the 2<sup>nd</sup> siege in 1994). The history of the town and the university is lost in the so called merger of the three campuses, in what can be called an act of self-desecration in that local histories of the town are somewhat neglected, particularly after the status of the town as the gateway to Africa was closed off when its rail link was curtailed in the previous era and now (2023) the NWU's website ignores the history and struggles of the campus during what was University of Bophuthatswana (Unibo)

Similarly, Universities of Technologies in South Africa also show some gaps in their offerings:

Cape Peninsula **University of Technology** (CUPT): It offers Applied Sciences that has a set of diverse offerings: a Business and Management Sciences that seeks to emphasize innovation; its Education, Engineering and Built Environment Faculty that has interesting technological and industry and community-based studies; Health and Wellness Sciences; and an Informatics and Design Faculty. These options speak well for this institution, yet what is missing Fine Arts, Drama or even Art subjects or Faculties.

**Central University of Technology** (CUT) has an Engineering (with various specializations), Built Environment and Information Technology with Mathematical and Physical Sciences; A Teaching and Learning Faculty and a Center of Innovation in Learning; A Health and Environmental Sciences with Agricultural, Clinical, Food, Health and Life Sciences included therein; A Faculty of Business

Management and Business Support Studies, Entrepreneurship Development, Government Management, Hospitality Management, and Tourism included in this faculty; a Humanities Faculty with Communication sciences, Design and Studio Art, Language and Social Sciences Education, Mathematical Science and Technology Education, and Post-graduate studies in Education. But despite its Design and studio art, it has no Drama or Fine Art.

**Durban University of Technology (DUT):** it has a Business School, Center for Learning and Teaching and a Writing Center, A Faculty of Accounting and Informatics, and one of Applied. Sciences, A faculty of Arts and Design, a Faculty of Engineering and the Build Environment, a Faculty of Health Sciences, a Faculty of Management Sciences. Faculties of Arts and Design, Engineering, and a Faculty of Applied Sciences, and is also a host of centers in innovation, research, and institutes. Its diversity is truly amazing as it goes across boundaries of science and the arts.

**Mangosotho University of Technology (MUT)** has only Engineering, Management and Natural Sciences. This was a few years ago. The website was not accessible in January 2024, for a more up to date search on it. If such offerings are continuing, it remains very partial in terms of its curriculum in the arts, humanities, and social sciences.

**Tshwane University of Technology (TUT)** is one of largest Universities of Technology, with nine campuses. It has an Arts faculty with a host of Arts (related) courses: for e.g., Film, TV, Photography, Jewelry Design, Performing Arts (Drama, Music) but this may have been updated, but the website did not have anything on its site in January 2024. Such offerings are very much balanced although it's not certain if its overload of nine campuses is not overbearing, and how widespread these offerings are across the nine campuses.

**Vaal University of Technology (VUT)** has four faculties: that of Applied and Computer Sciences; Engineering and Technology, Human Sciences, and Management Sciences. and Engineering and with some interesting offerings: a Departmental of Visual Arts and Design (includes Fine Art, Photography, Graphic Design and Fashion), various Engineering, Technology (Transfer/Innovation) and Enterprise offerings. This mix is also quite novel at a University of Technology, and is more diverse in terms of cross disciplinary boundaries.

All in all, the curriculum mix seems to be more favorable at the Universities of Technologies, if the focus is on what kinds of cross disciplinary boundaries there are in terms of curriculum offerings there are, and HBUs seems to follow the government emphasis on emphasizing the hard sciences which may be due to funding being more generous in those fields, due to historical imbalances arising from the apartheid dispensation for the majority black population in the country. But this may also be at the expense of some such universities being negligent of the arts, drama, and the broad cultural fields at such institutions if the curriculum is what reflects their emphasis. Perhaps a glance at the research output of the country's institutions, that follows hereunder, may reveal a bit more.

### **A glance at research development at universities in South Africa**

In the area of research, that terrain that the apartheid government kept for the historically white universities, see interesting trends. As the following tables below reflect the differing levels of research at universities. The below table-1 reflects the glaring unequal outputs as a structural and historical feature, despite the newly found even ground policy of the Department of Higher Education since the new political dispensation with a renewed higher education policy that is seen to be fair and equitable, despite the historical inequities of the past, geographical region in which HBU's are placed (especially those from the old system of apartheid, the TBVC states (Transkei, Bophuthatswana, Venda and Ciskei 'homelands' and self-governing territories such as where UniZulu is based). The top 13 universities are mainly ex-white universities (UKZN, UJ, UP, SU, UCT and WITS, NWU, UFS, RU, NMU) that predominate with research at over 70% of the research, and with ex-black universities or Technikons that are taken over by most of these. NWU for instance is not a merged institution but in effect has created a black campus of Mafikeng as its satellite. The bottom 14 are HBUs or Technikons, that are either new, historically and remain predominantly black campuses or are Technikons. They share a measly 14% of the research output. Such a hierarchy is a continuation of the apartheid structure and cannot be reduced to the lack of effort on the

part of those HBUs or Technikons since most of the latter two do perform in terms of their own figures. It is a structural feature of the new dispensation as a continuity from the past, with little in the way of how to shift such parameters, to finance such efforts or to revitalize the sector for an even dispensation of higher education and its historical and geographically related inequalities.

**Table1: Publication output by type at Universities**

Institution	Book Units		Conference Proceedings Units		Journal Units		Overall units in 2019	Share of total sector units
	Actual Units	% of total institutional units	Actual Units	% of total institutional units	Actual Units	% of total institutional units		
UKZN	156.8	6.14%	61.9	4.87%	2067.3	12.02%	2286.1	10.88%
UJ	359.0	14.05%	294.8	23.20%	1622.6	9.44%	2276.3	10.83%
UP	296.0	11.58%	82.2	6.47%	1682.4	9.78%	2060.6	9.80%
SU	327.7	12.83%	110.2	8.67%	1595.8	9.28%	2033.7	9.68%
UCT	220.0	8.61%	79.9	6.29%	1636.2	9.52%	1936.0	9.21%
WITS	272.4	10.66%	68.5	5.39%	1577.8	9.18%	1918.8	9.13%
NWU	189.2	7.41%	118.8	9.34%	1233.2	7.17%	1541.2	7.33%
UNISA	125.6	4.92%	73.1	5.75%	1167.9	6.79%	1366.6	6.50%
UFS	305.9	11.97%	52.3	4.12%	813.5	4.73%	1171.7	5.57%
UWC	68.0	2.66%	12.3	0.97%	513.8	2.99%	594.2	2.83%
RU	65.8	2.58%	21.7	1.71%	460.5	2.68%	548.1	2.61%
NMU	21.0	0.82%	49.6	3.90%	389.0	2.26%	459.6	2.19%
UL	13.1	0.51%	25.9	2.04%	348.7	2.03%	387.7	1.84%
UFH	7.6	0.30%	1.5	0.12%	353.1	2.05%	362.2	1.72%
TUT	8.2	0.32%	58.4	4.59%	294.8	1.71%	361.3	1.72%
DUT	33.7	1.32%	19.5	1.53%	300.1	1.75%	353.3	1.68%
UNIZULU	19.1	0.75%	17.2	1.36%	219.7	1.28%	256.0	1.22%
CPUT	32.0	1.25%	32.6	2.57%	178.1	1.04%	242.7	1.15%
UNIVEN	6.7	0.26%	1.4	0.11%	189.5	1.10%	197.6	0.94%
CUT	9.5	0.37%	49.1	3.87%	112.4	0.65%	171.0	0.81%
VUT	4.7	0.19%	29.9	2.35%	127.3	0.74%	161.9	0.77%
SMU	1.2	0.05%	0.0	0.00%	105.5	0.61%	106.7	0.51%
WSU	4.5	0.18%	4.0	0.32%	86.7	0.50%	95.2	0.45%
UMP	1.7	0.07%	3.1	0.24%	65.9	0.38%	70.8	0.34%
MUT	0.5	0.02%	0.4	0.03%	45.3	0.26%	46.2	0.22%
SPU	4.6	0.18%	2.4	0.19%	7.2	0.04%	14.2	0.07%
<b>Total</b>	<b>2554.7</b>	<b>100.00%</b>	<b>1270.8</b>	<b>100.00%</b>	<b>17194.2</b>	<b>100.00%</b>	<b>21019.7</b>	<b>100.00%</b>

**Source:** Report on the Evaluation of the 2019 Universities’ Research output (DoHE, RSA, 2021).

This is corroborated with the following Table 2, that shows over 70% research outputs of book publication to the top 8 universities (UJ, SU, UFS, UP, WITS, UCT and NWU). The latter, unsurprisingly, has been declared the DoHE as a historically advantaged institution, which whitewashes the Mafikeng campus that has over 95% of black students and is a historically black campus, and reflects the challenges of smaller, rural based institutions, and the Technikon sector.

All in all, from the tables below table1, 2 and 3 denote that, the situation is quite drastic, particularly by the fact that the national situation reflects a gloomy picture of youth conditions:

...more than two thirds of university dropouts in South Africa come from families of ‘low economic status’ (Letseka and Breier, in Oxlund, 2010) ...Limpopo’s unemployment grew by 14.3% from 1995 to 2002....., while 74% lived on less than R250 (\$22) a month (2002). (It)...means... (a large) ...majority of University of Limpopo (students find it) ...extremely difficult to mobilize the funds necessary to cover the required annual upfront payment.

More recently, the following trends are evident:

Table 2: Percentage of book publication output units by University 2018 and 2019

Institution	2018		2019	
	No. of Units	% Column	No. of Units	% of Total
UJ	220.4	10.6%	359.01	14.05%
SU	280.5	13.6%	327.67	12.83%
UFS	182.5	8.8%	305.89	11.97%
UP	266.8	12.9%	295.95	11.58%
WITS	196.5	9.5%	272.44	10.66%
UCT	169.6	8.2%	219.96	8.61%
NWU	131.9	6.4%	189.22	7.41%
UKZN	176.0	8.5%	156.85	6.14%
UNISA	146.6	7.1%	125.63	4.92%
UWC	45.4	2.2%	68.00	2.66%
RU	94.9	4.6%	65.83	2.58%
DUT	49.7	2.4%	33.74	1.32%
CPUT	13.9	0.7%	31.98	1.25%
NMU	35.5	1.7%	21.05	0.82%
UNIZULU	17.4	0.8%	19.06	0.75%
UL	2.7	0.1%	13.13	0.51%
CUT	6.2	0.3%	9.51	0.37%
TUT	3.9	0.2%	8.17	0.32%
UFH	12.1	0.6%	7.63	0.30%
UNIVEN	10.8	0.5%	6.66	0.26%
VUT	2.7	0.1%	4.75	0.19%
WSU	0.7	0.0%	4.50	0.18%
SPU	0.0	0.0%	4.59	0.18%
UMP	3.3	0.2%	1.74	0.07%
SMU	0.0	0.0%	1.24	0.05%
MUT	0.0	0.0%	0.48	0.02%
<b>TOTAL</b>	<b>2069.9</b>	<b>100.0%</b>	<b>2554.7</b>	<b>100.0%</b>

This situation has not changed much of late, as in the case of what Pouris and Inglesi-Lotz (2014) assert: of limited government funding to universities, even when it produces 85% of the countries publicly available research. Poris et al. thus ask, whether supporting the research and development is as per international best practice are or is it the result of historical misalignment, and what are the benefits from the current government support for the private sector?

In the social sciences, the work of academics and activists lies in the creation of multiple spaces for growth, such as in its labor laws, or in the construction of Sector Education Training Authorities (SETA's). On the other hand, the country remains on the edge of a precipice in relation to its disaffected (but optimistic) youth, its marginalized rural areas, and in its rife divisions between the poor and the wealthy.

The question is then what can be done in the context of such a scenario, of historical and structural constraints, of the super creation of wealth and of the continued production of massive poverty on a societal scale. One contribution could come from shifting knowledge production and its parameters, from creating new boundaries to the knowledge economy, to rejuvenate the system that has hard edges to its structures, to shift the status quo for a more just and equitable higher education system. One of the ways this can be done is around policy direction of historically black universities and Universities of Technology, in order for a greater impact on the rural areas, where the majority of the population of the country's with '11 million of the 17 million that are poor, live in rural areas' (RDP, 1994). The current figures (Global Economy (2022) are 31.7% (rounded of) in rural areas. Even if it is lower than the average global rural population, its nearly one third population remains a problem in the rural areas.

In the light of this, the following are some initial suggestions for a revamped higher education sector, to consider in dealing with the problems of higher education sector, particularly in light of the new higher education framework (2014) that supports HBUs, black campuses and Techinkons.



**Table-3: CAGR books and book chapter units by university 2013-2019**

Institution	Units per year							CAGR
	2013	2014	2015	2016	2017	2018	2019	
UFS	33,02	39,59	46,34	33,42	39,71	33,07	305,89	44,9%
UWC	16,73	10,06	6,82	10,41	7,25	11,26	68	26,3%
WITS	68,46	77,94	86,38	79,06	102,94	83,73	272,44	25,9%
UNIZULU	7	6,85	11,33	6,78	5,59	8,71	19,06	18,2%
UKZN	58,34	52,35	51,21	61,03	67,08	46,82	156,85	17,9%
SU	126,74	103,51	82,64	115,61	105,17	98,7	327,67	17,2%
UP	119,64	147,04	151,02	139,83	111,86	86,7	295,95	16,3%
RU	28,69	29,8	34,6	29,45	23,8	13,31	65,83	14,8%
UJ	182,5	253,47	288,44	304,15	303,72	304,06	359,01	11,9%
DUT	17,37	10,93	31,82	8,73	21,25	18,96	33,74	11,7%
UNISA	68,13	78,61	87,73	85,15	57,94	76,28	125,63	10,7%
UCT	122,48	117,29	102,62	103,94	104,46	101,92	219,96	10,3%
NWU	119,98	107,34	126,8	90,13	82,37	134,62	189,22	7,9%
WSU	4	1	2,5	2,75	4	4,17	4,5	1,9%
CPUT	41,79	46,5	33,44	32,6	23,4	42,82	31,98	-4,4%
CUT	13,02	13,65	30,85	44,89	44,23	63,39	9,51	-5,1%
UNIVEN	9,15	13,68	9,08	13,08	8,9	5,74	6,66	-5,2%
UFH	11,26	14,75	8,85	15,99	17,91	2,83	7,63	-6,3%
UL	23,83	9,21	33,01	17,78	15,99	33,8	13,13	-9,5%
VUT	13,01	29,85	13,28	18,21	22,86	40,79	4,75	-15,5%
NMU	84,16	77,39	63,64	84,09	54,23	43,17	21,05	-20,6%
MUT	2,25	1,63	1,25	2,87	0,25	1,88	0,48	-22,7%
TUT	65,37	58,63	44,43	47,92	49,5	41,4	8,17	-29,3%
UMP	-	-	-	-	1,5	0,79	1,74	
SMU	-	0,25	1,5	-	-	0,57	1,24	
SPU							4,59	
<b>TOTAL</b>	<b>1236,92</b>	<b>1301,32</b>	<b>1349,58</b>	<b>1347,87</b>	<b>1275,91</b>	<b>1299,47</b>	<b>2554,68</b>	<b>12,8%</b>

*Policy Option 1: Further spreading the wings of science to rural areas.*

*The following policy option seeks to address the lack of hard sciences in the rural HBUs in South Africa, though Universities of Technology are not included:*

University & readiness	Justifications & problems	Choice/Options
Transkei: State of the art hospital: Distance from University?  North West: Has a new hospital but failed to use it as an opportunity to make it a university hospital, especially if there is no medicine offered at the Mafikeng campus.	<b>MEDICAL SCHOOL:</b> all HBUs are in rural areas: some have nearby hospitals; with poverty-ridden communities, are remote, with hazardous health.  Dentistry or nursing: as alternative at one or other: bar NWU that has nursing.  Buy in from medical (related) fraternities/civics? Any process for this? Budget and operational limits for many medical schools? Western-side	Choose 1/more for medical school: Transkei: hospital strengthens the case. NWU: niche area is health. Universities of Technology: Choose site for a Nursing and/or dental faculty.

University & readiness	Justifications & problems	Choice/Options
Venda, Limpopo, Zululand and Limpopo: Do they have nearby hospitals to use? Mpumalanga & Sol Plaatje? Having a hospital nearby is one factor, what other factors can be used to decide which university gets a medical school?	desertification in SA: related sciences NB to develop in NWU Mafikeng, Northern Cape: food, water, environment, jobs, geography etc.	PhDs at university of Technology possible?
Coastal Transkei, Zululand: SA's Geo-metro set up. UniZulu: comprehensive university: M-Technology • Venda, Mahikeng, Limpopo: Border Universities. • Inland: Fort Hare. • North West: mines, Engineering (Potch). • Sol Plaatje: SKA	<b>ENGINEERING FACULTY:</b> University development necessary at rural locations. All face student readiness issue (Maths/Science). 1. Problem: attracting staff. 2. Buy in: from engineering (related) companies/civics? 3. Eng. specialties guide policy. 4. <b>Solutions:</b> Foundation year, NRF, CSIR, grants, incentivize 5. Funds determines if 1 or more Eng. Faculty?	None of the homelands have industrial Zones for engineering development: this principle needs to be established & operationalized for Engineering to be established in any rural area. Some HBUs have added Science fields. Cabinet decides.
Transkei, Zululand, Venda, Limpopo: Fort Hare, North West: Spreading ICT may be best option in terms of hubs: due to connectivity spread that IT brings, but at what financial costs? Perhaps more research is needed here. Universities of Technology: ready for IT upgrades.	<b>INFORMATION TECHNOLOGY:</b> May face similar problems as in Engineering (thus similar solutions). Crucial that ICT be spread into the rural areas for connectivity. Solution: ICT Hubs Company and civic buy in? Process?	Support and revamp all technikons and HBUs that are lacking in IT facilities.

**Policy option 2: Reinventing post-graduate studies at rural HBU's.**

*The following policy options seeks to reinvent post-graduate studies at rural HBUs/Technology Universities.*

With many of the weaker state of HBUs in relation to post-graduate student output, particularly Doctorates, the following may suggest some way to tackle such a problem:

Due to the low level of post-graduate research and student numbers at the rural HBUs and University of Technology in general, particularly at Masters and PhD level (these figures need to be cited, as it may not be all across all HBUs), the following needs to be considered:

NRF	Problems & comments	Possible or not
Reserve specific bursary allocations to rural HBUs for PhD and Masters in all fields.	Monitoring and evaluation necessary	Possible
Reserve a portion of NRF research chairs to give to rural campuses/University of Technology	Incentivize senior professors to go there. Monitor research production / participation	Possible

NRF	Problems & comments	Possible or not
Reserve portion of NRF grants for research at rural HBUs/University of Technology.	What portion of NRF grants?	Possible
	Prioritize niche areas.	Possible
Incentivize the private and public sector to support such an initiative.	Incentive mechanisms needed.	Possible
	Assign industrial zones.	Possible
Reserve individual and group project funding to HBUs in rural areas, as per the niche areas of HBUs.	Calculation needed of how much grants needed.	Possible
	Add to niche areas.	Possible
Directed NRF funds to develop team research: post-graduates, PhDs, Professors between HBUs and HWUs.	Needs direction/leaders.	Possible.
	Incentivize.	Possible.

**Policy 3:** Rearticulating the role of HBUs in S.A.

*The following attempts to rearticulate the role of HBUs and Universities of Technology in South Africa.*

Universities	Problems	Possible or not
Incentivize or fund HBUs to upgrade as many staff to get PhDs.	Resistance from HWUs	Possible
	Or Funds wastage. Solution: monitor and evaluate fundraising.	Possible
Incentivize HWU/HBU joint research and projects in rural areas.	Co-operation is voluntary.	Possible
		Possible
Incentivize HBUs/Universities of Technology to build on national/international partnerships of research/innovation.	Need willing partners.	Possible
Incentivize universities to link to schools to build relations for empowering schools in rural areas.	Partner willingness needed, staff and offices needed to do this.	Possible
	Education Dept’s need to come to the table.	Possible

**Policy option 4:** Governments role:

*The role of Government to rearticulate HBU’s/University of Technologies - alternatives:*

Government	Problems and uses	Possible or not
Shift location of relevant SETAs to tighten the link between SETA and universities: to skill the youth: for e.g., place mining SETA at HBU/University of Technology that gets Engineering faculty	Problems: institutional, political & sector resistance to the shift.	Possible
	Advantage: skills dispersal	Possible
	Monitoring and evaluation needed.	
Use various govt. agencies to liaise with HBUs/Universities of Technology to commit to research, infrastructure development and post-graduate studies.	Problems: too vague: policy needs direction from Dept. of Higher Education.	Possible
		Possible

Government	Problems and uses	Possible or not
Align BRICS funding for students/research to HBUs & University of Technology: e.g.: HBU, HWU, Universities of Technology joint work.	Resistance from BRICS governments, HWUs or HBUs.	Possible
Reconsider the SAPSE formulae for HBUs for directed funds to recapitalize or support on infrastructure, research, and innovation, & PhD degrees.	Get Higher Education Department to agree. Resistance from HWU's.	Possible
Add rural community service: part of SAPSE formulae to incentivize reinvigoration work	Metro & HWU universities to resist. Rural communities have to buy in to idea.	Possible
Establish Innovation fund: to redefine rural periphery, with HBU participation: Science parks, Innovation hubs, Massive Community Libraries for all levels.	Problems: availability of funds, Buy in from HBU's, communities and the private sector to contribute.	Possible
Fund for infrastructure for Arts and Drama at HBUs: count needs to be made of how many exist there.	Crucial: to rearticulate HBUs & Universities of Technology & add science & Arts: Drama and Arts at HBUs need to be established. Question: Where? How many?	Possible

### CONCLUSION:

A few preliminary conclusions can be drawn from the above, being preliminary since there needs to be a task team that needs to do a more thorough investigation of the sector with site visits and the potential to convince the political authorities to consider the above alternatives as a beginning of a discussion around revamping the HBU and Universities of Technology sector for a turnaround strategy.

Nonetheless, what this paper found is also significant and some its suggestions need to be taken seriously. First, there needs to be strategic intervention in arts and performance areas within the HBUs and Universities of Technology. Second, there is also a need for strategic intervention in the areas of research support and teaching areas for such institutions. Third, that issue of redress for such institutions needs to be revisited, with monitoring mechanisms to be effected when applying redress, equity, and development of the whole higher education sector (by adding in HWU interactions with such institutions). There needs to be a much greater effort to increase the PhDs of staff at HBUs and Universities of Technology, and to revisit quality at such institutions (the national higher education audits are a guide through which this can be done). It cannot be that the creation of virtual institutions, envisaged by the Humanities Charter (2011), can be willy-nilly establishing a new area of functioning when the current is so unequal and imbalanced. Finally, the Sector Education Training Authorities (SETA's) need to be brought closer to the university sector, so as to make them more functional and education-based impacts and for the sector to gain from such initiatives. Finally, it also needs political will and funding, with the rights kinds of human and other resources for the development of a healthier higher education landscape in South Africa, and for overall progress and development not only in the region but also for African development, as envisaged by the Humanities Charter (2011).

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