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# Access to, and Success in, Higher Education in Post-apartheid South Africa: Social Justice Analysis

Chika Sehoole* and Kolawole Samuel Adeyemo**

**Abstract**

The post-apartheid government that came to power in 1994 inherited an inequitable and unjust higher education system whose expression included preferential access to higher education for whites and limited higher education opportunities for the black majority. As a result, one of the priorities of the new government was to redress the inequalities of apartheid by adopting policies that would widen access to higher education for all South Africans and, simultaneously, ensure their success. This article analyses the progress made in the implementation of equity policies by posing the following question: 'What progress has been made in the pursuit of a policy of equity of access and of success since 1997?' We have examined government-related documents and institutional practices to answer this question. We link access with success to explain the impact of the transformation agenda on the outcomes of higher education. Using social inclusion and justice theory, we contest neoliberal ideologies of access (Gidlye et al. 2010) as merely increasing participation rates and relying on the economic role of higher education, without paying attention to the factors that should facilitate success in higher education. Methodologically, the paper relies on the documentary analysis of secondary data, on social theory, and on primary data obtained from official government policies and reports.

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**Résumé**

Le gouvernement postapartheid qui est arrivé au pouvoir en 1994 a hérité d'un système d'enseignement supérieur inéquitable et injuste caractérisé par un accès préférentiel à l'enseignement supérieur pour les Blancs et des opportunités d'enseignement supérieur limitées pour la majorité noire. En conséquence, l'une des priorités du nouveau gouvernement d'alors était de corriger les inégalités de l'apartheid en adoptant des politiques visant à élargir l'accès à l'enseignement supérieur à tous les Sud-Africains et, simultanément, à assurer leur réussite. Cet article analyse les progrès réalisés dans la mise en œuvre de politiques d'équité en posant la question suivante: «Quels sont les progrès réalisés dans la mise en œuvre d'une politique d'équité en matière d'accès et de réussite depuis 1997 ? » Pour répondre à cette question, nous avons examiné des documents officiels ainsi que des pratiques institutionnelles. Nous avons fait un lien entre l'accès et la réussite pour expliquer l'impact du programme de changement sur les résultats de l'enseignement supérieur. En utilisant la théorie de l'inclusion sociale et de la justice, nous contestons les idéologies néolibérales d'accès (Gidlye et al. 2010) qui ne font qu'augmenter les taux de participation et en se fondant sur le rôle économique de l'enseignement supérieur, sans tenir compte des facteurs qui devraient faciliter la réussite dans l'enseignement supérieur. Sur le plan de la méthodologie, cet article s'appuie sur l'analyse documentaire des données secondaires, la théorie sociale et les données primaires obtenues à partir des politiques et des rapports officiels du gouvernement.

## Introduction

The post-apartheid government that came to power in 1994 inherited an inequitable and unjust higher education system. Historically, the apartheid higher education system was differentiated and diversified along lines of race and ethnicity (Badat 2009). One distinguishing feature of the apartheid higher education system was the unequal access to education of different racial groups. This inequality of access to opportunities for higher education had an impact on participation rates in the higher education system (Sehoole and Phatlane 2013). Even though the gross participation rate in higher education in South Africa was approximately 15 per cent at the dawn of democracy in 1994, it was the highest rate in sub-Saharan Africa; but the lowest when compared to other developed countries. Obvious inequities were observed when gross participation was broken down in terms of race. For example, whereas Africans constituted 80 per cent of the total population their participation rate in higher education was only 9 per cent. The participation rate for Coloureds was 13 per cent; for Indians it was 40 per cent; and for whites it was 70 per cent – even

though the latter constituted only 10 per cent of the total population. These figures show that Africans (who make up the majority of the population) received the worst treatment under apartheid.

As a result of this situation, the newly, democratically elected post-apartheid government was bequeathed a higher education system that did not enjoy public trust and confidence. There was a need – and a demand – for higher education to transform itself in order to fulfil its potential of meeting the requirements of a democratic South African higher education system. Central to this need for transformation was a belief in the capacity of higher education to deliver opportunities for self-fulfilment; to create critical citizens; to encourage free intellectual inquiry; to respond to contextualized societal and economic needs (high-level skills); and to produce knowledge for a modern economy (CHE 2004). Even though higher education in South Africa faced the challenges outlined above, there continued to be a belief in its potential to contribute to consolidating democracy and social justice; to produce critical intellectuals; to develop knowledge, and to expand and improve the economy. Higher education that serves the purposes of democracy helps to lay the foundation of greater participation in economic and social life more generally. By increasing opportunities for social advancement on the basis of acquired knowledge, skills and competencies, higher education also enhances equity and social justice.

It is for this reason that a higher education system that was characterized by inequalities of access to learning opportunities could not contribute to the promotion of democratic values and the building of a just society, and, therefore, needed to be transformed. The value and legitimacy of the higher education system in South Africa must be judged on the extent to which it provides access and opportunities for all South Africans. This entails providing evidence of opening access to black South Africans (especially Africans); to women and other socially disadvantaged groups; to non-traditional learners, including students from working class and rural backgrounds; and to adults who possess work-related knowledge (CHE 2004). The vision for a transformed higher education was captured in the White Paper on Higher Education which reads as follows:

> [ext] The Ministry's vision is of a transformed, democratic, non-racial and non-sexist system of higher education that will promote equity of access and fair chances of success [own emphasis] for all who are seeking to realise their potential through higher education, while eradicating all forms of unfair discrimination and advancing redress for past inequalities (DOE 1997: 11). [ends]

This vision was premised on an understanding of the key role that higher education plays in society as an allocator of life-chances and an important vehicle for achieving equity in distributing opportunities and promoting achievement among South African citizens.

This article analyses the progress made in the implementation of equity policies by posing the following question: 'What progress has been made in the pursuit of the policy of equity of access and of success in higher education in post-apartheid South Africa?' In addressing this question, the paper addresses the following issues: policy and context of the transformation of higher education.

## Policy Context of Transformation of Higher Education in South Africa

The pursuit of transformational goals that would facilitate access and a fair chance of success to correct past inequalities came with many challenges. Firstly, the damage to blacks' intellectual, social and economic lives under apartheid remains an important factor in formulating policies on access. Secondly, the poor social and academic background of the majority of leaners leaving the school system remains an issue which influences students' higher educational successes or failures. Because of the inequalities of apartheid education, the post-apartheid government inherited an unequal school system reflecting poor performance, especially among black schools. South Africa has also performed poorly in international assessments tests, such as TIMSS (Howie 2003) and PIRLS studies (Howie 2006). The poor performance of the school system had an impact on the quality of graduates who entered higher education in that many came academically under-prepared and could not cope with the demands of studying at higher education institutions.

A part of the strategy to redress past inequalities includes widening access to higher education and ensuring success, which has received attention in the literature on higher education (see, for example, Boughey 2012). According to Cele and Brandt (2005), the concept of access can be categorized into two forms, namely, physical access and epistemological access. Physical access (access to space and resources that higher education institutions provide) refers to ensuring that all those who enter higher education are qualified to actually do so. Epistemological access refers to access to the curriculum content and knowledge (academic literacies) needed to succeed in higher education (Morrow 1993). Higher education institutions are responsible for facilitating epistemological access by putting in place support mechanisms, such as extra-curricular assistance, that will facilitate the acquisition of the necessary academic literacies and social capital that will ensure success in higher education. The CHE

(2010) study on teaching and learning explains that epistemological access is a political as well as an educational issue that turns the spotlight on both the unconscious and unquestioned process of concept formation and knowledge acquisition and on the assumptions that inform the manner in which teaching at a university takes place.

Central to the question posed in this paper is the extent to which equity of access has been achieved and, if so, whether it has been accompanied by equity of success. Even though there has been an analysis of equity of access and success (CHE 2004 and Boughey 2012), few analytical studies have been done using social justice as a frame of reference (Wilson-Strydom 2011). Instead, greater attention has been paid to measuring access in terms of increasing participation, especially of previously disadvantaged students.

According to the CHE (2010) there are three main ideas that have emerged in the research on access over the years. Firstly, 'in the late 1970s and early 1980s apartheid barriers to formal access to higher education were contested and resisted'. Secondly, 'in the late 1980s and early 1990s there was an effort to increase the participation rates of students from historically disadvantaged groups'. Thirdly, is 'the massive expansion of the student population throughout the late 1990s into the present millennium' (CHE 2010: 33). The point of contention is in what government considers as access after apartheid (Fraser and Killen 2005). Access is a political imperative in present day South Africa. Higher education was considered as an instrument to respond to social and national needs, new realities and opportunities (DoE 1997) and the widening of access as a strategy to be used to meet those needs.

In giving effect to widening access for blacks and increasing their chances of success, the government adopted two major policies, namely, the National Plan for Higher Education (NPHE) in 2001, and the New Funding Framework in 2003. Through these two policies, planning and funding would be used as instruments to achieve the government's goal of transformation. In the National Plan for Higher Education (DoE 2001) – adopted seven years after the dawn of democracy – the following concern was raised:

> [ext] Although the demographic composition of student body was changing and beginning to reflect the composition of the population; equity of access still remains a problem as black people and women are under-represented in business, commerce, science, engineering and technology programmes, as well as in postgraduate programmes in general. Furthermore, equity of access has also not been complemented by equity of outcomes, with black students accounting for a larger proportion of drop-out and failure rates than white students (DoE 2001). [ends]

In dealing with the issue of equitable access to higher education, the National Plan proposed an increase in participation rates from 15 to 20 per cent over a ten to fifteen year period to address equity and human resource development imperatives (DoE 2001). The approach of targeting an increase in participation rates in its literal interpretation expresses the 'access as participation approach' that allows blacks and women the opportunity to enter higher education – something they were deprived of in the past. A pressing concern was that by opening access, what would happen to quality (maintenance of standards) and social justice? Here, quality is associated with access and social justice, and access may be denied to some students by institutions in the application of criteria that maintain standards by screening out and excluding candidates who do not meet the admission criteria and, therefore, do not have the potential to succeed. However, justice is needed to ensure that this process is fair. It is important to pursue access policies based on the quality of the results students obtain in their studies and not only by using race and gender as criteria. In view of the foregoing, access should also be measured by the equitable admissions of qualified blacks, whites and women who have the potential to succeed in higher education – not, necessarily, by the number of blacks and women on the admission lists.

In pursuit of equity of access and success policies, government has proposed the use of funding as an instrument to both widen access and to make resources available to support the success of those who qualify to enter higher education. In post-apartheid South Africa the imperatives of funding students and providing institutions with resources to address inequalities are couched in terms of the need for individual redress and institutional redress. As part of the transformation agenda, the White Paper 3 of 1997 identified the use of financial resources to bring about equal opportunities for individuals and institutions in a two-pronged strategy, namely: (a) the use of bursaries and loans through the National Student Financial Aid Scheme (NSFAS); and (b) the use of earmarked funds in the funding framework through foundation programme grants and teaching development grants. The use of bursaries and loans exemplifies social inclusion and an intervention strategy aimed at providing fair opportunity for the realization of the potential of all young South Africans who qualify to enter higher education. The use of foundation programme funds and teaching development grants is social redress directed at institutions to assist poor students and to deal with the learning needs of academically under-prepared students. In this way, institutions have become more responsible for access and equity but they are accountable to government in terms of the use of allocated resources to achieve equity of access and of outcomes.

In pursuit of individual redress, the NSFAS, which had already been established in 1996, would be resourced to support academically eligible but financially poor students to access higher education. With respect to institutional and social redress, the funding framework made provision for foundation programme grants that supported institutions which admitted students from disadvantaged backgrounds. The aim of this grant was to enable universities to assist students from disadvantaged education backgrounds to acquire the academic and literacy skills necessary for success in higher education. That intervention addressed the problem of the high dropout rate amongst first year students which at that time was estimated to be 50 per cent (DoE 2001). In particular, black students were performing badly and were the major casualties in terms of failure and dropout. Government expected universities to review their students, see what their academic needs were and to start responding to these in order to improve their chances of success.

The use of teaching development grants was another social redress mechanism aimed at assisting institutions to provide better care and support for their students beyond the first year. It was envisaged that the grant would be used to curb and reduce the dropout rate and to increase the success and graduation rate of students. Whereas the Foundation Programme grant focused mainly on providing support for first year students based on their schooling history and preparation to enter university, the Teaching Development grant focused on supporting students beyond the first year until they graduated. It can, therefore, be concluded that the use of NSFAS would facilitate physical access for poor students while the use of Foundation Programme and Teaching Development grants would facilitate epistemological access.

## What Progress has been Achieved in Equity of Access and Equity of Outcome?

One of the strategies proposed in the National Plan for Higher Education to address equity was an increase in participation rates. Given the unequal participation rates among the various racial groups in South Africa, one indicator of equity would be to see an increase proportional to the size of each racial group – a strategy that would entail a deliberate targeting of the underrepresented racial groups in higher education. As indicate earlier, in 2001 the gross participation rate was 15 per cent and the goal was to increase it to 20 per cent over a ten to fifteen year period. The following table shows an improvement in the headcount enrolment by race where the number of African students increased from 59 per cent in 2002 to 68 per cent in 2011. There was also a drop in the headcount enrolment of white students from 27 per cent in 2002 to a 19 percent participation rate in 2011, but this is insufficient to indicate a significant shift in the attainment of equity.

**Table 1:** Headcount Enrolment by Race

| Race | 2002 | 2006 | 2011 |
|---|---|---|---|
| **African** | 404,000 (59.9%) | 451,106 (61%) | 640,442 (68%) |
| **Coloured** | 39,000 (5.8%) | 48,538 (6.5%) | 59,312 (6.3%) |
| **Indian** | 49,000 (7.3%) | 54,859 (7.4%) | 54,698 (5.8%) |
| **White** | 182,000 (27%) | 184,667 (25%) | 177,365 (19%) |
| **Total** | 674,000 | 739,170 | 931,817 |

**Source:** CHE 2004; 2013.

South Africa's higher education system requires access for social justice and repositioning of policy to eliminate social exclusion. Table 1 shows the trend in access to higher education by race in South Africa within a decade. While these figures show that Africans have steadily achieved an increase in enrolment (1.1 per cent increase between 2002 and 2006 and 7 per cent in 2011), these increases are comparatively small relative to indicators and, therefore, not significant enough to claim that equitable access and/or social justice has been achieved. The use of the participation rate (the number of eighteen to twenty-four year olds in higher education as a proportion of the total population) as a criteria indicates that there are obvious inequities in higher education as demonstrated in Table 2 below.

**Table 2:** Participation Rates by Race

| Overall | | White | Indians | Coloureds | Africans |
|---|---|---|---|---|---|
| **1993** | 15% | 70 | 40 | 13 | 9 |
| **2006** | 16% | 57 | 48 | 13 | 12 |
| **2011** | 17% | 57 | 47 | 14 | 14 |

**Source:** CHE 2004; 2013.

Considering the large population of black Africans and the need to redress injustices of the past, it is evident from these statistics that some African students were excluded from participating in higher education. The reasons for, and the nature of, this exclusion are complex and problematic. Wilson-Strydom (2011) used the concept of 'capabilities' to analyse social exclusion and justice in the context of higher education in South Africa. The core argument embedded in his framework draws attention to the complexity of social, personal and environmental conversion factors that can impact on the opportunity freedoms (capabilities) of individual students (see Wilson-Strydom 2011). More broadly, building a socially just higher education system should entail real freedom or opportunities for each student to be educated. This is a fundamental right of every South African; it is a matter of social justice; and it is what the White Paper 7 intended to achieve. However, there is a contradiction between the intention of this policy and what the capability approach theory believes should constitute real access. For instance, White Paper 7 promotes equal access to higher education for black Africans, especially by funding the participation rate, while the capability approach argues that this has resulted in the opposite because it fails to pay attention to: 1) the enhancement of students' capabilities to successfully access, and engage with, university study; and that 2) the misalignment of the policy has provided opportunities for unjust practices to continue in higher education in South Africa. In other words, social justice and access should complement each other in order to deal with the problems of social exclusion and injustices in higher education.

An observation made in 2001 in the National Plan for Higher Education (NPHE) was that although equity of access has been attained, equity of outcome had not been realized. This holds true today. The availability of student financial aid has facilitated access of, especially, black students from poor backgrounds. There has been an increase in the number of disadvantaged students who were enrolled in the sector. Between 2002 and 2011 the size of the university sector in terms of full-time equivalent students had increased by 38 per cent. Similarly, the headcount enrolment of disadvantaged student increased from 61 to 71 per cent (RSA 2012). These statistics suggest that government may have achieved its objective of increasing access to higher education, especially of disadvantaged students. This is further supported by the findings from the review of the NSFAS which indicate that between 1999 and 2009 NSFAS was able to provide financial aid to 650,000 disadvantaged students through the distribution of R12 billion (equivalent to US$110 million) (RSA 2010).

While access,which was one of the goals set by the NPHE, was achieved, success was not realized. A review of the NSFAS paints a gloomy picture of the success of these NSFAS-sponsored students by indicating that only 19 per cent (125,210) of these students graduated over the decade 1999–2009, while 48 per cent (316,320) dropped out or did not completed their studies. The remaining 33 per cent (217,470) of the NSFAS students are still studying. Of the 67 per cent who are no longer studying, 28 per cent have graduated and 72 per cent have either dropped out or have not completed their studies (RSA 2010). This situation points to a need to reconsider the concept of access to promote social justice. The main challenge is that the majority of students who are at risk of dropping out because of disadvantaged educational backgrounds are being admitted to mainstream programmes (Staden 2013). Because many students are ill-prepared for university or unable to cope with the demands made on them, a significant number never graduate (Wood 1998; Tait, Eeden and Tart 2002; Payas 2011). The situation begs the question: 'What are the effects of the Foundation Programme grants and the Teaching Development grants which are supposed to be used to provide academic support for students in order for them to succeed?' Attaining the goal of equity of access and success is a complex issue that requires a multi-faceted approach.

While indiscriminative access must be available, especially in South Africa which has a history of racial exclusion of black people from higher education, higher education institutions must also take note of the students they are admitting and find ways of supporting them. The high dropout rate also shows that while money is important in facilitating access, it is not enough to ensure success as students have different personal attributes, academic abilities, and come from diverse socio-cultural backgrounds (Tinto 2006) which can have a bearing on their academic success. Therefore, their readiness for a university education has a bearing on their academic achievement or withdrawal (Sehalapelo 2013). Issues of students' social background and their ability to adjust, not only to the higher education context but also to the environment and to the new institutional culture, are important considerations.

Equity of outcomes has also not been realized; this is demonstrated by the fact that course success rates are inequitable and continue to mirror the apartheid picture of access as demonstrated by Table 3 below.

**Table 3:** Course Success Rate by Race

| | 2006 (%) | 2008 (%) | 2011 (%) |
|---|---|---|---|
| **African** | 67 | 68 | 73 |
| **Coloured** | 69 | 73 | 76 |
| **Indian** | 69 | 72 | 76 |
| **White** | 78 | 80 | 83 |
| **Total (average)** | 70 | 72 | 75 |

**Source**: (CHE 2013).

Table 3 further shows that despite interventions to improve access and success, inequalities and inequities continue to persist along racial lines.

## Social Inclusion and Justice Theory Proposition

Nearly all countries face challenges related to inequality of access in their higher education systems. With reference to Altbach's work, MacGregor (2013) maintains that the massification of higher education around the world has created more differentiated systems and more inequality in institutions whereas inequality of access in South Africa can be traced directly to the legacy of the apartheid administration. Discussion of the concept of access has resulted in different policies and often leads to political ideological criticism (Knight 2009). As a result, the topics of access and social inclusion have become priorities for governments in many countries.

Historically, social inclusion has its roots in France in the mid-1970s and later spread to, and was adopted by, many European countries to address the challenges of welfare (Rawal 2008). In higher education, social inclusion theory was first introduced and adopted in Australia. The aim of the theory was to address the challenges of inequity and to ensure the realization of equity and equality within a societal context. While this theory is seen as one that helped the Australia government to reform its higher education system, it has also been debated and blamed for a lack of diversity and non-universality in its application. Nevertheless, the fact that social inclusion was broadly defined by the Australian government made it look holistic (Gidlye et al. 2010). The definition of social inclusion in the Australian context encompasses opportunities for people who are disadvantaged, homeless, jobless, disabled and/or who have health or mental health problems. Within a global perspective, this

could further include race, ethnicity, religion, age, ability and location (IAU 2008). In these policies, social inclusion means ensuring that everyone who enrols for higher education studies has the same opportunities to succeed.

The policy of social inclusion has found expression within a neoliberal ideology. According to David Harvey, a neoliberal ideology is a global political ideology based on the belief that government involvement, including in education, should be constrained to allow economic growth and human capital accumulation. The South Africa government has embraced a neoliberal ideology and introduced social inclusion in higher education where historically disadvantaged groups are beneficiaries of equity policies which gives them access to skills acquisition that will improve their chances of participating in the socio-economic life of the country. Redress and equity policies were adopted in the government's Growth Equity and Redistribution (GEAR) economic policy of 1996 which had a neoliberal orientation as it advocated cutting back on state expenditure in public services. There was a shift in the macro-economic policy of government from Keynesian policies which found expression in the Reconstruction and Development Programme (RDP) to the neoliberal framework as reflected in GEAR. In this shift 'the goal of redistribution was dropped as a main objective; and the government role in the economy was reduced to the task of managing transformation' (Adelzadeh 1996: 1). The economic policy framework that was adopted by government in 1996 represented the essential tenets and policy recommendations that were oriented towards subjecting all government policies to market forces with the state playing a regulatory role.

Sehoole (2005) argues that the introduction of GEAR did not just immediately reframe a policy process; it also immediately set constraints on what was feasible regarding the availability of resources to address the transformation agenda. It derailed the popular views held within the Mass Democratic Movement (MDM) structures of the reconstructive role that the state was supposed to play in promoting access and pursuing redress and equity goals. The goals demanded that new resources be made available to higher education, but these resources would not be forthcoming within the GEAR framework. One consequence of GEAR was that in the year following its adoption there were cuts in funding for higher education, thereby constraining the availability of resources to fund the expansionary policies of government to increase access. Higher education policies, then, became characterized by a tension between expansion to address social and equity goals on the one hand, and fiscal constraint to manage the public purse on the other.

The application of a social inclusion theory in South Africa is narrowly defined as having the primary intention of 'creating a virtuous cycle of growth and reducing poverty and inequality' inherited from apartheid experiences. The narrowest interpretation of social inclusion in higher education in South Africa as merely increasing participation rates of disadvantaged blacks and women for economic reasons is linked to the ideology of neoliberalism (see Gidley et al. 2010). Despite the fiscal constraints under which government was operating, there were attempts to widen access, as demonstrated by the increase in the number of previously disadvantaged students who entered higher education.

From the point of view of access, neoliberalism views social inclusion as a mere investment in human capital and skills for the purpose of economic growth. Neoliberal ideology relies heavily on increasing participation rates of disadvantaged groups in society for the purpose of economic development and global competiveness. However, it does not address how to ensure social justice in higher education in the process of providing access. Since the 1980s neoliberalism has engulfed the political landscape of western democracies and left behind 'demolished social infrastructure, inequality, poverty, privatisation and individualism' (MacGregor 1999). Instead of following neoliberal ideas on access, social inclusion theory can rather be viewed as access through social justice. This is about respecting individual rights, dignity and fairness for all (Giroux 2003). According to Tonks and Farr (2003):

> [ext] access to higher education is a starting point, because certain groups within society are still significantly underrepresented and disadvantaged at the level of participation, hence, social justice theories and participation see inclusivity in educational contexts as a concern with successful participation which generates greater options for all in education and beyond (Nunan, George and McCausland 2005: 252). [ends]

Based on the neoliberal system, provision may be made for the inclusion and participation of disadvantaged groups in higher education, but the contributory factors to disadvantage and their role in the high dropout rate in higher education needs to be critiqued. Instead, government policies on access have always been geared towards increasing access in terms of the participation rates of disadvantaged groups. Many countries believe participation and success rates will improve by increasing funding. For instance, there was a commitment by the government of South Africa to increase the budget allocation of

the NSFAS in order to benefit the more academically eligible, but financially disadvantaged, students. A study by Sehoole and Phatlane (2013) shows that between 2004 and 2007 the number of NSFAS grantees increased by 27,000 from 113,693 to 140,901 with an increased budget allocation during the same period from just under a billion rand (US$1.1 million) to approximately R1.7 billion (US$200 million). However, Knight (2009) examined the challenges of developing financial resources and policies that enhance the twin goals of equity and access to higher education within the diversity of national contexts and responses to the global challenge of developing strategies to finance wider access to higher education. Knight (2009) has provided evidence that there is still a mismatch between governments' aspirations to achieve access and the reality of the funding provided.

This particular framework and understanding of these concepts need to be applied in the analysis of the access and success of students in South Africa in relation to social inclusion in the post-apartheid context.

## Conclusion and Recommendation

This paper has analysed the provision and challenges that came with the implementation of the White Paper 3 of 1997 and the use of funding as lever in the transformation of higher education in post-apartheid South Africa. The analysis examined what the transformation aimed to achieve in terms of redressing the apartheid legacy and the inequalities that were prevalent in higher education. Various policies and interventions by the South Africa government were considered to ensure that historically disadvantaged groups in the society were given equal opportunities, not only to access higher education but also to benefit from economic and political power.

The findings reveal a slight improvement in the participation rates of blacks after the implementation of transformation policies. However, the dropout rate is still alarming and it is difficult to find the cause of the continuing problem as the government can prove and show statistics of the funds it has allocated to support access and improve success rates in higher education. Similarly, blaming institutions for high dropout rates may also be rebuffed because universities exercise autonomy to ensure that those they admit meet their quality standards. If the students who are admitted meet the admissions standards, why do they dropout? This focuses attention on a range of issues concerning the internal operations of universities. For example, is the language of teaching the students' own language? Are relations between teachers and students positive?

In view of the high dropout rates, there is a need to align funding to every category of dropout scenario in order to achieve student success. This could include, for example, changing the funding system so that universities receive only part of the government payment for a student on admission and receive the balance when the student successfully completes the course. This is the way student funding is organized in Norway. Such a system would incentivise universities to take care of their students and work with their learning needs to ensure that as many as possible are successful. The danger, however, is that the university could respond by reducing its standards in order to pass as many students as possible just to increase its income. In Norway and similar other countries this is counter-acted by a sense of professionalism in academics who insist on maintaining standards.

In order to develop such a professional spirit among academics in South Africa a programme to instil pride in educational development should be advocated. This means that the government should reform the current funding framework in terms of the following professional practices:

- Funding of professional academic modules
- Funding of curriculum revision
- Funding for different aspects of dropout
- Funding of, and getting involved in, projects for dropouts
- Funding for academic teaching – not just research.

By adopting this strategy the universities and their staff members would be able to build a sense of professional values and pride that would translate into excellence in teaching and learning. In the 1990s and 2000s colleges in the US formed groups to address faculty needs and build a sense of professionalism among their members. It has been argued that more attention should be paid to the interrelationship between campus collegiality, teaching and learning and power in institutions of higher education because it can promote quality teaching and collaboration. However, this was only possible because of flexibility in the organizational structure and democratic system that exist at every institution.

Similarly, universities and colleges in the UK also had similar voluntary professional groups that shared ideas on curriculum improvement, the designing of modules, teaching improvement, networking and various other academic issues for quality improvement purposes. In addition to the professional groups,

the UK Marking Scheme discouraged injustice and restricted dropout rates, respectively. The marking scheme did not allow lecturers (professors) to disadvantage students because examinations were always re-marked by external examiners whose role it was to re-validate the contents of the answers supplied by students and the scores awarded by the lecturers. This is not an audit system but a kind of quality improvement measure to ensure fairness and justice for students. In addition, there was special funding for excellence and professional discipline. These measures allowed institutions and academic staff to focus on delivering quality and that the fair treatment of students was guaranteed.

Although the historical background of higher education in Norway, the UK and the US is different to that of South Africa, they have introduced policies and have had experiences that are relevant to South Africa. This means providing financial incentives not only to admit black students but to motivate them to succeed. However, partly funding universities on the basis of their completion rates could be counterproductive. In addressing the problem of the dropout rate in South Africa, it is important to put government money to its most productive use. These combined measures could instil a sense of professionalism among institutions and their staff in South Africa and move them forward towards achieving equality of access and student success in higher education.

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# Revisiting the Postmodern Condition of a Higher Education Landscape: South Africa's Higher Education Epochal Archive, 1999–2002

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**Abstract**

This article problematizes and critiques the change scenario which unfolded in the South African higher education (HE) landscape over the period 1999–2002. It locates its discussion and analysis within an *ideo-critical discourse-interpretive analytics* framework. It also employs the following conceptual tools: chaos theory; liminality; negative knowledge; managerialism and corporatism; marketization and technologization of discourses; and postmodernity and globalization. Against this backdrop, the article first argues that the change scenario, which occurred in some of South Africa's higher education institutions (HEIs) during this period, was predicated on the aforesaid conceptual devices. Second, it contends that most of South Africa's HEIs during that historical juncture were being inveigled into a postmodern condition, even though they were still epicentres of academic modernity. In the light of all this, the article counter-argues that the postmodern intervention in the HE system as driven by the state only served to worsen the difficulties faced by many of the then historically disadvantaged institutions (HDIs) which were part of this system. Finally, the article ends by offering some of the prospects that were in the offing for South Africa's HEIs at that time.

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**Résumé**

Cet article pose la problématique et fait une critique du scénario de changement qui s'est déroulé dans le paysage de l'enseignement supérieur (ES) en Afrique du Sud durant la période allant de 1999 à 2002. Il situe son débat et son analyse dans un cadre d'analyse idéo-critique et interprétatif du discours. Il emploie également les outils conceptuels suivants: la théorie du chaos; la liminalité; la connaissance négative; le managérialisme et le corporatisme; la commercialisation et la technicisation des discours; la postmodernité et la mondialisation. Dans cette optique, l'article soutient dans un premier temps que le scénario de changement, qui a eu lieu dans certains des établissements d'enseignement supérieur de l'Afrique du Sud durant cette période, était fondé sur les dispositifs conceptuels précités. Ensuite, il affirme que la plupart des établissements d'enseignement supérieur de l'Afrique du Sud au cours de cette période historique ont été entrainés dans une condition postmoderne, même s'ils étaient encore les épicentres de la modernité académique. En conséquence, l'article bat en brèche l'idée selon laquelle l'intervention postmoderne dans le système de l'enseignement supérieur telle que menée par l'Etat n'a servi qu'à aggraver les difficultés rencontrées par la plupart des institutions historiquement défavorisés qui faisaient partie de ce système. Enfin, l'article conclut en déclinant certaines des perspectives qui s'offraient à l'époque aux établissements d'enseignement supérieur de l'Afrique du Sud.

## Introduction

With the advent of the new South Africa in 1994, South Africa's higher education (HE) was on the cusp of a major metamorphosis at the turn of the new millennium. Firstly, we contend that the change scenario which unfolded in the South African HE sector in the period 1999–2002, displayed elements of chaos theory. This resulted in the HE landscape being characterized – momentarily – by antipodes of order and disorder, and stability and instability. Secondly, we assert that the HE scenario as it was at that juncture reflected dynamics by means of which it found itself in a postmodern condition. This postmodern condition was nowhere more pronounced than in the higher education institutions (HEIs) (see Lyotard 1984; Peters 1992; 1995; Usher and Edwards 1994). HEIs, in particular universities, had to respond resiliently and innovatively to the postmodern imperatives of that epoch: they had to produce custom-built, marketable and consumable academic courses and programmes in the midst of the globalization of knowledge and information.

They also had to rationalize, privatize and outsource their non-core entities (see Badat 2001; Peters 1992; Muller, Cloete and Badat 2001; Tjeldvoll 1998–99). Moreover, they had to chart new ways of survival, establish new

niche areas, and position themselves accordingly so as to be able to deal with the unforeseen and, often, unpredictable changes. All these imperatives had to be responded to by universities as they were expected to toe the line of the new technocratic-educational discourse and ideology of the state. They also had to do so as they were all required to share – proportionally or disproportionally – the ever-shrinking funding by the state, and to justify their existence and relevance in the public eye.

Against this backdrop, we make a third assertion that the postmodern solutions to educational problems stood, at that time, in contradiction to South Africa's HEIs, as many of them were inherently modernist epicentres in both their nature and their orientation. Thus, the postmodern intervention in the HE system, although at face value looked like the right tonic for this sector of education, only served to exacerbate the difficulties faced by many of these institutions. Far from adequately addressing the educational problems and crises besetting HEIs, postmodernity was set to spawn problems and crises of its own in these institutions. Besides, as it was during that epoch, the postmodern approach to HE seemed to be, at best, a well-calculated move to persuade universities into buying into the new technocratic and educational speak, and at worst, a desperate and ad hoc move to try to keep up with the developed countries which were more post-industrialized and more postmodernized than South Africa was.

## Framing Issues: Conceptual Lens

We intend investigating South Africa's HE landscape during the designated epoch by employing the following concepts: change; chaos theory; liminality; negative knowledge; marketization; technologization of discourses; modernity; postmodernity; and globalisation. Built into these conceptual metaphors is the *ideo-critical discourse-interpretive analytics* framework in which the analysis of the critical issues pertaining to South Africa's HE during this epoch is grounded. The ideo-critical discourse-interpretive analytics theoretical framework is a blending and collapsing of three, but not epistemologically mutually exclusive, theoretical paradigms of analysis. The paradigms in question are: ideology critique; critical discourse analysis (CDA); and interpretive analytics.

Ideology critique, also referred to as ideological criticism, is 'concerned with theorizing and critiquing ... processes of meaning production as social and political realities' (Bible and Culture Collective 1995: 72). It focuses on a critical analysis of objective and subjective elements of domination, and dominant modes of knowledge and dominant social practices or discourses. It also unpacks the truth and falsity of ideological contents by demystifying the *naturalness* attached to those contents (Giroux 1983). Above all, ideology

critique highlights multiple discourses embedded in a text; it lays bare the intricate nature of power relations characterizing institutional practices; and it serves as a vital critical tool for the decentring of both the reading subject and the subject matter (Bible and Culture Collective 1995). It is, in the context of this article, an analytic tool with a neo-Marxist and Foucauldian orientation.

Critical discourse analysis is a form of discourse analysis concerned with analysing and critiquing the relations between dominance, discourse, power and social inequality, and the various manifestations of these relations in social, discursive and institutional practices (Fairclough 1992; 1995; 2000; van Dijk 1993; 1996). It is an interdisciplinary analytical approach geared towards exposing hidden power structures and highlighting the discursive and linguistic nature of social relations of power in contemporary societies by focusing on the workings of language, ideology, discourse and texts (Fairclough 2000; Wodak 1996).

Interpretive analytics is a combination of Foucault's two forms of social theoretical analysis – archaeology (archaeological analysis) and genealogy (genealogical analysis) – and their respective critiques (Dreyfus and Rabinow 1986; Flood 1991). On the one hand, archaeology refers to the archive – systems of statements, discourses or discursive formations and the rules within which individuals can speak, and the object of their discourses. Archaeological analysis is a method of analysing how statements in given instances of texts and discourses function in certain ways and not in others; how they carry certain meanings and not others; and how and why certain discourses, and not others, get spoken or do not get spoken at a particular point. In other words, the object of this type of Foucauldian analysis is to describe what can be spoken of in a discourse; what discourses disappear, survive, get repressed, censured or re-used; which words and statements are regarded as authoritative, valid and unquestionable, and which are not. So, the focus here is on discursive formations as rules constituting areas of knowledge (Davidson 1986; Chouliaraki and Fairclough 1999; Preece 1998; Smart 1985).

While archaeology is the archive of discourses, genealogy is, on the other hand, a history of statements and discourses: it is a historian's tool for studying historically variable and observable discursive formations. It is a method for criticizing various forms of discourses, knowledge and power relations using a historical lens. In this sense, the major focus of this analysis is the knowledge/power nexus, and the exercise of technologies of power on the self and on the body. Hence, it is referred to as the genealogies of power/knowledge, as the disciplinary technologies of power, or as the disciplinary technologies of the self. In genealogy, power is viewed productively, circularly and positively (Davidson 1986; Dreyfus and Rabinow 1986; Fairclough 1992; Smart 1985;

Sawicki 1991). So, in all, interpretive analytics explains how and why forms of knowledge become valorized (legitimized and become regimes of truth), and how and why they become suppressed (deligitimized and become subaltern) (Cherryholmes 1988; Dreyfus and Rabinow 1986; Flood 1991).

## Change, Chaos Theory, Liminality and Negative Knowledge

The prime mover of the movement, here, was the government which spearheaded this change through the Higher Education Act No. 101 of 1997 (henceforth the HEA) and realized it through its implementational blueprint, the National Qualifications Framework (NQF). The application and implementation of change in South Africa's HE system, we contend, exhibited, intentionally or unintentionally, features of chaos theory. In addition, it was characterised by liminality and 'negative knowledge' (Cetina 1996: 299). In general, chaos theory is the science of complex and non-linear phenomena or a study of unstable aperiodic behaviour in deterministic non-linear dynamical systems. It is concerned with distinguishing between linearity and non-linearity, order and chance, determinism and unpredictability, and clarity and aporia in systems hierarchies or in the way the universe is organized. In other words, it attempts to understand why systems that appear to be characterized by disorder, instability, disorganization and randomness tend to have a semblance of order, stability, organization and regularity. In this way, it gives special attention to small background changes or quantum events as it views them as having far-reaching ramifications for systems (see Boudourides 1995; Hayles 1990; Progogine and Stengers 1984). In its more radical conception, chaos theory is a 'scientific version of postmodernism, [a] scientific metaphor for late-20th-century cultural values of relativism, plurality, and chance' (Ströh 1998: 17).

Liminality refers to the ambiguous status phenomena assume during periods of transition. It is a condition in which phenomena are in a state of disturbances, uncertainties, imperfections and errors. It is a condition which, following Atkin and Hassard (1996) and Peters' (1987) view of management and organization theory, is typified by zero degree, undecidability, contradictions and ambiguities, and by lack of order, organization and direction. Thriving in a liminal condition is negative knowledge, which in itself is not non-knowledge, but rather, knowledge of mistakes committed in getting to know something. That is, negative knowledge is a knowledge related to the limits of knowing (Cetina 1996).

The chaos theory underpinning and the liminality and negative knowledge characterizing the change advocated by both the HEA and the NQF had more than shell-shocked HE institutions such as universities. However, the shell-shock was variable and more pronounced at some universities than at others.

The last scenario related more to the then historically disadvantaged institutions (HDIs) – particularly historically black universities (HBUs) – than it did to the then historically white universities (HWUs). That is, a lot of HDIs were not only grappling with the change and the chaos dynamics accompanying it in terms of their management, administration and governance, but were also actually dogged by chaos, disorder, instability and crisis management instead of managing and regulating change. Instances of chaos and crises dogging the management, administration and governance of the HDIs even got reported by some of the country's mainstream print media in varying degrees, but with metronomic regularity. The following snippet just about bears testimony to this:

> [ext] After his appointment as Education Minister ... [*the then minister*] embarked on an intensive programme of consultations with key players in the field. His assessment, while not surprising, was nevertheless shocking. The minister submitted that there was a *crisis* 'at every level of the system'.... A spate of negative reports during the past [few days] on the state of tertiary education has served to highlight the ferment, even turmoil, affecting much of this sector. Midway through the academic year, five South African tertiary institutions [*mostly HDIs*] are still being led by people in acting positions ... Unsurprisingly, the problem facing most of the country's former black universities and technikons is particularly daunting.... Clearly, this situation is untenable. [*The minister*] has already indicated that the troubled tertiary education sector is facing major *changes*, including mergers between certain universities and changing roles for others (Daily Dispatch 1999a: 12, own emphasis). [ends]

In another related instance, the same mood of change gripping HDIs was encapsulated in the following: '[*The new Education Minister*] said mergers were on the cards for some institutions and a change in role for others [was imminent] as he attempts to find solutions for the country's troubled tertiary education sector' (The Star 1999a, own emphasis). As a corollary, the *change-chaos-crisis* scenario spawned by the HEA and the NQF at the HDIs, and which seemed to have also caught the principals of these institutions napping, was well captured by the point that:

> [ext] The South African Universities Vice-Chancellors' Association (Sauvca) hopes its inquiry into the size and shape of institutions would enable the heads of tertiary institutions to provide a more informed response to Education Minister's call for a 'critical alignment of universities.... Vice-Chancellors of *Historically Disadvantaged Institutions* are

> also fully involved in the Sauvca process, although they are conducting a separate study into the matter (The Star 1999a, own emphasis). [ends]

That the HDIs' vice-chancellors were undertaking their own separate study into how they should shape and shake up their institutions showed how privately and differentially the *change-chaos-crisis* scenario affected their respective institutions. The untenable situation at some of the HDIs prompted yet another unsavoury development in which the then 'Education Minister was [*compelled to table*] a Bill in Parliament that [was to] give him the power to appoint administrators to run universities and technikons which [were] deemed to be mismanaged' (Sunday Times 1999: 1). This meant, according to the Higher Education Amendment Bill clause tabled by the then minister, that:

> [ext] If an audit of the financial record of a public higher education institution, or an investigation by an independent assessor ... reveals financial or other maladministration of a serious nature, the minister may appoint an administrator to perform the functions relating to governance or management...for a period not exceeding six months.... The memorandum to the new Bill says the minister's powers are aimed at putting an end to an appalling lack of management capacity because the councils and management of these higher education institutions are not complying with their fiduciary responsibilities (Sunday Times 1999: 1). [ends]

In certain instances, the *change-chaos-crisis* trend sweeping through some of the HDIs had given rise to a culture of anarchism, itself a symptom of liminality and negative knowledge. Anarchism is used here in two different, but not necessarily mutually exclusive, senses: first, as a situation whereby institutional principles, rules and aims are deliberately flouted, disregarded, or downplayed so as to throw the whole institutional system into anarchy; second, as a way of challenging the power relations existing between people and institutions, and as a means of mistrust of those wielding power (see Collins Cobuild English Language Dictionary 1987; Longman Lexicon of Contemporary English 1981; Purkis and Bowen 1997). Anarchism in the first sense manifested itself through a practice of stalling or delaying the establishment of properly constituted governance structures as required by the HEA which was prevalent in most HDIs. This was one aspect which accounted for the 'ferment' and 'turmoil' afflicting these institutions. It was also a cause for grave concern which was further complicated by the fact that some of these 'tertiary [education] institutions [were] still being led by people in acting positions'

(Daily Dispatch 1999a: 12). The mere fact that most HDIs were still being led by acting principals two years after the HEA had come into effect, was proof positive of the fact that they were bent on either flouting, disregarding, or downplaying the institutional principles, rules, aims and even requirements as laid down by the HEA, or subverting and defeating its ends thereof.

It was also the case that some of the HDIs were not yet ready to implement the new academic programmes as provided for by the NQF. This was so despite the fact that such programmes were to have been in operation at least from 1999. The end result of all this was a paralyzing institutional disorder: a lack of direction and vision, uncertainty, stagnation, confusion and floundering, which cut across all the strata of the affected institutions. This situation was, directly or indirectly, attributable to the liminality and negative knowledge which some of these institutions were experiencing.

## Managerialism and Corporatism

To reverse the untenable situation in which rooting out one evil was tantamount to begetting another, many South Africa universities had been forced to adopt alternative strategies: running themselves as corporate entities; shedding the excess non-core part of their structures; and going the *science and technology* route. Running universities as corporate entities meant universities had to be run, managed and administered like business entities and large corporations where accountability, financial viability, corporate governance, and existential justification, are the order of the day. This strategy involved both managerialism and corporatism. Managerialism, used here in its Blaxter, Hughes and Tight's (1998) sense, refers to the substituting of the old-style university collegial management style with the corporate-oriented management style due to state pressure. For its part, corporatism refers to the permeating of corporate management ethos in every sphere of the (private) business and in the economy in general, and its application to them. However, at the core of corporatism is the executive arm of the state (Crook, Pakulski and Waters 1992). In the case of South African universities, both managerialism and corporatism had, since the beginning of the 1990s, made inroads into the day-to-day running of their affairs. This trend had been, from the mid- to the late 1990s, largely aided and abetted by the new democratic government which, using and cracking its funding whip, demanded that universities get out of their modernist comfort zones of churning out 'blue-sky research' (Mail & Guardian 1999a: 22), and generating knowledge for its own sake (Daily Dispatch 1999b; City Press 1999a), and transform themselves into respectable and flexible entities.

The shedding of the non-core business meant universities had to concern themselves less with non-academic operations and services, and more with

those operations and services that were academically inclined. This was a contradiction in terms as they were, at the same time, expected to conduct themselves like corporate institutions. The *science and technology* route meant that universities (and technikons, as they were then known) had to put more emphasis on the science- and technology-related disciplines, and less emphasis on those disciplines that were non-scientifically and technologically oriented. In trying to achieve these three triple goals, and in attempting to address the evils of academic modernity, South African universities increasingly found themselves having to embrace postmodernity or the postmodern way of operating their business. However, this contradicted and was diametrically opposed to their traditional configuration as epicentres of academic modernity. That is, by and large, most of them were still institutions quintessentially founded on modernity.

## Marketization and Technologization of Higher Education Institutions and their Discourses

In the epoch under discussion in this article, marketization and technologization were increasingly establishing a firm grip on South Africa's HE sector and on the discourses which were part of it. Alongside the marketizing and technologizing practices taking place in the HE sector were related practices of commodification, consumerism, clientelism, conversationalization/informalization, de-bureaucratization and de-differentiation. Each of these terms needs contextualizing. Marketization refers to the restructuring of HE and its 'orders of discourse' (Fairclough 1996: 71), and its various networks or configurations of its discursive practices, along with market-oriented practices (see Olssen and Peters 2005). Technologization of discourses refers to the use of techniques or technologies of power – and this in the extended Foucauldian sense – in the HE practices, while commodification is the tendency by which institutions such as HEIs, whose business concern has nothing to do with producing or manufacturing commodities, operate and organize themselves along commodity producing, distributing and consuming lines. Consumerism and clientalism are more about students being regarded as consumers and clients respectively; and conversationalization is about rendering traditionally *formal* discursive practices and relationships as more conversational and personal. Lastly, on the one hand, de-bureaucratization refers to breaking down bureaucratic practices common to HEIs and making them more client- or student-friendly, while de-differentiation is about doing away with the highly differentiated modes of operations and practices in HEIs (see Aldridge 1998; Crook, Pakulski and Waters 1992; Fairclough 1992; 1995; 1996; Sarangi and Slembrouck 1996).

***Colonization of the Orders of Discourse: Advertising, Conversationalization, Privatization and Discourse Technologies***

One way in which marketization of HEIs took place at that time was when modules, courses and programmes, and the required specific skills, competences and performance indicators which are part of them were packaged and displayed as sellable, marketable and consumable commodities. This form of marketization was largely aided by the advertising of modules, courses and programmes in local and national newspapers, and on other related media platforms. It was not uncommon during that time to come across course or programme advertisements such as the following:

- Interested to work in the Electronics Industry? ... Remember, we offer free CAREER COUNSELLING (Sowetan 1999a: 10)
- Look how much leverage (we) can give your career in engineering (City Press 1999a: 15)
- Your career as a manager starts the day you enrol at (our institution) (City Press 1999b: 26)
- No matter what! We will empower you. We ensure your freedom to learn, your freedom to earn and your freedom to choose (Sowetan 1999b: 23)
- Secure your future for the millennium.... State your case (Daily Dispatch 1999c: 20)
- Out with the old and in with the new! ... The new millennium is fast approaching, so why not resolve now to make a new start in the new year? (Sowetan 1999c: 16)
- Confidence and competence in hotel management (Sowetan 1999c: 16)
- Degree Programmes – disclosing the wealth and relevance of ... languages, religions and cultures (Mail & Guardian 1998: 40)
- Academic programmes for the year 2000.... Globally aligned for tomorrow's pulse (Mail & Guardian 1999b)
- Calling all teachers.... Invest in your future.... For better: Job security; Marketability; Chances of promotion; Salary (City Press 1999c: 18).

As HEIs advertised their courses and programmes, they made no bones about the specific skills, competences and performance indicators built into those courses and programmes, and the career paths and job opportunities the courses and programmes were definitely to make available to students as potential customers or consumers. They did so even in relation to the specific

performance indicators customers were likely to display after completing a given course or programme. This was evident in instances such as:

- [Our] [c]ourse provides graduates with the skills to operate effectively in any industry, in most countries of the world (Daily Dispatch 1999c: 5)
- [Our] courses [are] designed in consultation with the private sector, to make sure our graduates are equipped with leading-edge skills and knowledge top companies look for (City Press 1999b: 26)
- This course is the first step to a career in electronics and will open doors to the numerous opportunities in the Electronics Industries. The accent is on theory fully illustrated with practical insights and will equip students with the basic of servicing, assembly, repairing and the testing of electronic equipment (Sowetan 1999a: 10).

Advertising itself is a powerful tool or weapon of marketing – a point highlighted by Fairclough (1992; 1995). It is a tool serving multiple functions: it promotes, sells, profiles and markets commodities as well as centres producing those commodities. The same functions were served by advertising when it came to South Africa's HEIs. These institutions, besides selling, promoting, profiling and marketing their commodities (courses and programmes) through advertising, also had their own logos, images, identities, statuses and niche areas sold, promoted, profiled and marketed through advertising. In fact, they had to do so since in a Bourdieu-style spirit, they had to operate as 'structured systems of social positions in which [their respective] actors [had to] compete for access to and control over scarce resources' (Aldridge 1998: 4). Advertising also serves as a form of discourse on its own, in this case as an informational and promotional discourse; and it is a 'strategic discourse par excellence' (Fairclough 1992: 210). Built into the advertising technology employed by South Africa's HEIs, was the culture of information and knowledge promotion,which could also be referred to as 'promotional culture' (Aldridge 1998: 4; Fairclough 1995: 141), 'consumer culture' (Fairclough 1995: 138), or 'culture industry' (Crook, Pakulski and Waters 1992: 8). In its Bourdian conception, promotional or culture industry is, analogously, regarded as 'consumer habitus' (Aldridge 1998:7) – a 'habitus' being habitual preferences or dispositions and strategies consumers display when it comes to commodity choice or selection as pointed out by Aldridge (1998).

A manifest feature of the advertising discourse leveraged by HEIs during this period was conversationalization or casualization. This form of advertising discourse was distinguishable by its conversational tone and its casual approach. It was intended to establish intimacy and camaraderie with, and to

win the consent of, potential clients. The classic and illuminating examples of this type of advertising discourse at the time were:

- [Our Technikon] Wishes all matriculants (Grade 12s) GOOD LUCK for the exams.... See you on our Campuses in 2000! (Daily Dispatch 1999d: 15)
- 1, 2, 3 ... Good, you can count. Ever thought about becoming an account? (City Press 1999d: 2)
- GET AHEAD IN BUSINESS (City Press 1999d: 19)
- SECURE YOUR FUTURE FOR A BETTER LIFE (City Press 1999b: 17)
- Enhance your prospects and become a Global thinker (The Star 1999b: 11)
- We will help you bridge the gap between the skills you have and the skills you need to be competitive in the market place (City Press 1999b: 26).

The conversational or casual approach adopted by this form of advertising discourse was also meant to de-bureaucratize the social and human relations and the discursive practices prevalent in HEIs. By so doing, it intended to dispense with the highly specialized and differentiated role relationships (which are often intimidating to new students/clients) which are a quotidian feature of these institutions. In this discourse, as suggested by Fairclough (1992; 1995; 1996), public domain practices were fused with private domain practices. More importantly, students as consumers were simulatively accorded more authority status than the institutions they were expected to apply to, and the managerial discourse was transposed into the academic discourse through fracturing the boundaries between traditional university culture and corporate culture. This, then, was the 'colonization' (Fairclough 1992: 207; 1995: 136) of 'the order[s] of discourse of higher education' (1995: 148) by the orders of discourse belonging to other domains, especially business and management domains, a practice increasingly associated with many institutions and organizations in post-industrial and post-cultural societies.

Moreover, the conversational advertising discourse was meant to establish a broad clientele base: it was a psychological instrument of clientalism. Of course, advertising as a technique addresses and positions readers (see Fairclough 1995; Mills 1995). This was evident in the use of semiosis (the use of signs, symbols and graphics, and how they tended to shape and construct one's consciousness (see Fairclough 1992; 1995; Jay 1994), usually accompanying such a discourse. It foregrounded the commodities and the benefits accruing from them (what goods clients were likely to get and the possible job opportunities), while backgrounding the barriers clients had to overcome before securing commodities

(the money that clients had to pay in getting the goods, and the burden of hard work involved before any commodity could be obtained).

Another mode in which the marketization of South Africa's HEIs manifested itself was privatization and outsourcing. Large sectors, units, operations and services of most of South Africa's HEIs, especially the so-called non-core sectors, units, operations and services, were either privatized or outsourced to private companies or businesses. Both privatization and outsourcing are mainstream business practices meant to cut costs or losses (both financial and resource) through rationalization, and can take the form of restructuring current operations or retrenching human resources, or both. They are also meant to enhance the efficiency and effectiveness of the operations or services. The instrumental and economic value of these two modes of marketization as applied to universities was yet to be seen. They might as well have had multiple-edged effects: cutting costs and losses on one front, while incurring them on another; scaling down losses (perhaps the financial ones), while scaling up the loss of useful human capacity; streamlining services and operations on one front, while creating an array of uncoordinated and fractured services and operations on another; and doing away with unnecessary and sometimes bloated bureaucracy in administration and management, while creating multiple bureaucracies, administrations and managements, which could often have conflicting interests and controls, and claimed clashing stakes and ownerships over one institution, a prospect not healthy for a place such as a university.

One more way in which the colonization of the orders of discourse of HE by those of other domains took place was through the technologization of these orders of discourse, a practice referred to by Fairclough (1992: 215; 1995: 102; 1996: 71) as 'technologisation of discourse'. Fairclough uses the notion technologization of discourse in three senses: in its Habermasian sense to refer to 'the colonization of the lifeworld by the systems of the state and the economy' (1992: 215); in its Foucauldian sense to refer to the 'technologies and techniques which are at the service of modern bio-power' (*ibid.*); and in its Rosian and Millerian sense to refer to 'technologies of government ... (which are) strategies, techniques and procedures by means of which different forces seek to render programmes operable, [and] the networks ... that connect the aspirations of authorities with the activities of individuals and groups' (Fairclough 1995: 102; 1996: 72). In its Foucauldian conception, the term, *technology*, is related to the 'analyses of the alliance between social sciences and structures of power which constitutes modern bio-power, [and] which has brought life and its mechanisms into the realm of explicit calculations and made knowledge/power an agent of transformation of human life' (Fairclough

1996: 72). Foucault himself talks about this term as 'the techniques of the self' (1983: 250). This article appropriates *technologization of discourse* in the sense that Fairclough uses it; it also employs it to refer to the impact science and technology, particularly information technology, have on the orders of discourse operating in HE.

Occurring alongside the technologization of discourse are 'discourse technologies' (Fairclough 1989: 213) which are 'types of discourse which involve the more or less self-conscious application of social scientific knowledge for purposes of bureaucratic purposes' (*ibid.*). Instances of discourse technologies are teaching/lecturing, interviewing, counselling, and advertising (Fairclough 1992; 1995; 1996) on the one hand, and the managing and administering (of HEIs) on the other hand. During this period, most of South Africa's HEIs were increasingly becoming subjected to the technologization of discourse; and the discourse technologies of these institutions were becoming increasingly *expertised* in a number of ways. For example, teaching or lecturing in most South Africa's HEIs does not only require expert academic skills, but also requires specialized 'social skills' (Fairclough 1995: 103, 1996: 72) in which lecturers have to be trained. If not, experts or specialists, 'discourse technologists' (1995: 104; 1996: 73) or 'techonologists of discourse' (1995: 103; 1996: 73) are brought on board to expose them to such skills. Some of these discourse technologists operate as consultants in their own right and have to be paid for the expert consultancy services they are rendering.

Training in specialized social skills was one example of the application of social scientific knowledge and technology of government (Fairclough 1995; 1996) to HE so as to serve certain bureaucratic purposes: making university life and the HE enterprise learner- and employee-friendly. So pervasive was the need for the use of social skills that there was an emerging trend to use them across the board: in teaching/lecturing, counselling, interviewing, administration, management, etc. In fact, lecturers had, and still have, to develop the ability and acquire skills so as to upscale the quality of their own teaching. If they do not have that ability and the requisite skills, they need to be trained or have expert consultancy provided to them in this area. The whole quality appraisal exercise was intended to ensure quality promotion and assurance within the HE sector as one of the requirements of the NQF and the HEA (HEA 1997). In this case, it would be correct to say that HE was subjected to the disciplinary technique of control and brought under a panoptic surveillance à la Foucault. Most crucially here was that if the call for quality promotion and assurance turned out to be a *quality-mongering* for its own sake, then there was a danger involved as '[q]uality assurance [simply] introduced [for] nullities...

would be the apotheosis of conventionality and mediocrity' (Hart 1997: 305) likely to turn HEIs into another form of quality assurance industries.

**Postmodernity and Globalization**

All of the above instances – the marketization and technologization of South Africa's HEIs and the concomitant colonization of their orders of discourse by the orders of discourse of the other domains – reflected the extent to which postmodernity had affected the HE sector in South Africa. This 'postmodern condition' (Lyotard 1984: xxii; Nuyen 1995: 41; Peters 1995: xxiv; Smart 1992: 70; Usher and Edwards 1994: 155) was not easy to reverse, change or resist as it was aided by another related and equally powerful postmodern trend: globalization. The latter is defined, on the one hand, as:

> [ext] a vision of a borderless world or a deepening of the internationalization process, which is believed to strengthen the functional and weaken the territorial dimension of development or as the general dominance of Capitalism as the economic ideology, and the globalization of finance, manufacturing and services (Shrivastava 1999: 1). [ends]

On the other hand, it is defined as:

> [ext] multiple, inter-related changes in social, cultural and economic relations, linked to the widespread impact of the information and communications revolution, the growth of trans-national scholarly and scientific networks, the accelerating integration of the world economy and intense competition among nations for markets (Education White Paper 3, A Programme for the Transformation of Higher Education 1997). [ends]

In this regard, globalization is accompanied by 'Mcdonaldization' (Phillipson 1998: 101). *MacDonaldization* is a trend related to creating the impression of a global culture by producing global markets with a view to having products and information that target global customers that prefer global services produced by global suppliers. It is accompanied by an aggressive 24-hour hyper-marketing (Phillipson 1998). A globalized world is a digitalized, microelectronicized and computerized world that is Internet-driven. It is a world Smart (1992:115) sums up as having 'extended our nervous system ... in a global embrace', which compresses 'both space and time', and which 'electronically contracted ... is more [of]... a global village' as it is an 'electronic

cottage' (Crook, Pakulski and Waters 1992: 190). It is inhabited by 'tourists, immigrants, refugees, exiles, guestworkers, and other moving groups' (Rassool 1998: 95) who are the real citizens of a 'shifting *ethnoscope*' (*ibid.*). Most importantly, it is characterized by transnational/multinational corporations, international interdependence (Crook, Pakulski and Waters 1992), inter-market reliance, and global knowledge and information explosion wherein the last two (knowledge and information) are commodities.

## Information Technology and the New Electronic Technologies

The extent to which the orders of discourse of HE in South Africa had been colonized by globalization is immeasurable. Information technology was at the heart of this colonization. More and more of South Africa's HEIs were increasingly becoming part of 'the new information circuits' (Herwitz 1999: 37) of the new 'Communication Revolution' (Verwey 1998: 2). As they became part of these new information circuits, comprising electronic mail, the Internet, telematic tele-learning facilities, video-conferencing facilities, all of which are instances of the 'new electronic technologies' (Smart 1992: 114) colonizing education, HEIs found themselves having to change their traditional modus operandi. Three areas (but by no means the only ones) of the HE sector heavily affected by the new electronic technologies were: communication networks; job and programme (course) advertising; and information and knowledge dissemination.

In addition, job and programme advertising in most of South Africa's HEIs entered the new information superhighway as well. It was no longer unusual for HEIs to have their job and programme advertisements accompanied not only by their physical addresses, but also by their email addresses, a websites or home pages. This meant that, in most instances, HE job and programme advertising was part of the World Wide Web, and becoming 'Web-centric' (Planting 1999: 114). The corollary of this development was that HE jobs and programmes were exposed to both local and global markets – localization and globalization – a trend which affected HEIs themselves as much as it did their jobs and academic programmes.

## Globalized Education and Knowledge: Computerization, Mercantilization, Performativity and Vocationalism

If job and programme advertising in most South Africa's HEIs was becoming globalized, HE information and knowledge was even much more so. That is, information and knowledge in the HE sector was produced, ordered and presented as a commodity made available, in different forms, and to different consumers (with different tastes and appetites) who were located at different terminal points of the globe. Here information and knowledge was

a commodity and vice versa, a condition which is captured well by Smart when asserting that a distinguishing feature of the electronic age is that '[i] nformation has become the crucial commodity as, in turn, commodities have increasingly assumed the character of information' (1992: 116). As information and knowledge (and its provision) in the South African HE system became globalized, so did education (and its provision) as well, which was the basis of this information and knowledge.

Globalization of the HE sector in South Africa necessitated a move from uniformity, rigid specialization and factory-style hierarchization typical of modernity to diversity, multi-specialism and de-hierarchization characteristic of postmodernity (albeit South Africa's HEIs themselves were still centres of modernity in their outlook and orientation). This meant that HE in South Africa during that epoch was going through a postmodern condition à la Lyotard. The organizing features of a postmodern form of education and knowledge are: computerization (the key element of technologization); mercantilization; performativity (efficiency); and skills and competences (Crook, Pakulski and Waters 1992; Lyotard 1984; Smart 1992; Usher and Edwards 1994). The computerization of education and knowledge was manifest in the increasing use of email and Internet facilities by South Africa's HEIs, while the mercantilization of education and knowledge was evident in the way in which these institutions were operating like commercial centres. Here it makes more sense to assert that '[k]nowledge became another form of capital – [and] '[i]ndeed knowledge was not just money: it *was* money'' (Tyler 1999: 275). Performativity, skills and competences had emerged as the operative words in the South African HE landscape: operations, services, units, sections, managements, administrations, programmes, learning and teaching all had to display performativity, and all had to have skills and competences built into them. These were all the features embedded in the NQF.

With the dawn of the postmodern era for South Africa's HE, academicism (education, knowledge and research for its own sake) was very nearly replaced with vocationalism and instrumentalism (vocationally- or instrumentally-oriented and competence-based education, knowledge and research) (see Crook, Pakulski and Waters 1992; Smart 1992; Usher and Edwards 1994). So, it might be that while Lyotard's postmodern condition is about the 'incredulity towards metanarratives' of modernity (1984: xxiv), South Africa's postmodern condition as propounded by the NQF was an *incredulity towards the academicism* typifying HEIs. Also, with the dawn of that era it appeared as if research-oriented universities would be replaced by service-oriented universities. Research-oriented universities are universities placing a high premium on academically inclined research, knowledge and scholarship; service-oriented

universities are universities 'marked by professionally oriented courses lasting one week to four months [or more], tailored to fit the needs of the client/labor market' (Tjeldvoll 1998–99: 8). This was a *postmodern* move intended to lift the HE funding albatross from the state's neck.

## Language Games, Re-professionalization, Virtual Classrooms and 'the Death of the Professor'

There are three more trends associated with this postmodern turn in the South African HE system: the age of 'language games' (Lyotard 1984:v10; Lyotard and Thébaud 1989: 51) or language gaming; de-professionalization and re-professionalization of the academic personnel; and the emergence of 'virtual' classrooms. The notion of language games is about different pragmatic rules governing and informing the production and conceptualization of knowledge – scientific and narrative knowledge, each of which has its own language games and rules. That is, there are incommensurable or diverse language games constituting knowledge (Bain 1995; Lyotard 1984; Peters 1995; Usher and Edwards 1994). The age of language games or language gaming for HE in South Africa meant that there were different language games constituting knowledge. No one form of knowledge could claim to have a monopoly over all other forms of knowledge and truth as each knowledge has its own language games and rules. Hence, there was a need for many and varied programmes or courses. In the case of the second trend, the academic personnel in HEIs were expected to be de-professionalized from their old specialist disciplines and re-professionalized and multi-skilled into the new multi-specialist disciplines through the performativity of computerization, a development heralding 'the death of the [academic] Professor' (Nuyen 1995: 42; Roberts 1998: 232) à la Lyotard. The third trend meant that *traditional* classrooms would gradually fade away and be replaced by *virtual*, electronic, or online classrooms, a development that would signal that the 'labour-intensive institutions of higher learning [would] be in their last days' (Roberts 1998: 232) in South Africa.

## Conclusion

This article has problematized and critiqued the change scenario that characterized South Africa's higher education (HE) landscape in the 1999–2002 epoch. To this effect, it has framed its discussion and analysis within an ideo-critical discourse-interpretive analytics' theoretical grounding. Employing conceptual devices such as chaos theory, liminality and negative knowledge on the one hand, and managerialism and corporatism, and marketization and technologization of discourses on the other hand, the article has interrogated and problematized this change scenario and its impact on South Africa's higher

education institutions (HEIs). Against this background, it has made several observations. First, it has argued that the chaos theory underpinning and the liminality and negative knowledge typifying the unfolding change scenario was variable, but more impactful at the then historically disadvantaged institutions (HDIs) – particularly historically black universities (HBUs) – than it was at the then historically white universities (HWUs). Second, it has contended that both managerialism and corporatism had been making inroads into the day-to-day functioning of South Africa's HEIs since the beginning of the 1990s, and that these twin processes were an upshot of the new democratic government's funding scheme for HEIs.

Third, the article has pointed out that with the advent of the twin practices of marketization and technologization, South Africa's HEIs saw an increasing commodification of their academic programmes and courses and a corresponding colonization of not only their academic programmes and courses, but also their mainstream academic practices by orders of the discourse of private domains such as business and management domains. Fourth and last, the article has argued how the marketization and technologization of South Africa's HEIs and the concomitant colonization of their orders of discourse by the orders of discourse of the other domains manifested the extent to which postmodernity and globalization have affected the HE sector in South Africa. To this end, it has highlighted the irony concomitant with this postmodern configuration, as most of South Africa's HEIs still operated as epicentres of academic modernity.

So, given the foregoing discussion, what prospects did both postmodernity and globalization hold for South Africa's HEIs? One major prospect was that HEIs would have their orders of discourse colonized by those of other domains on an unprecedented scale. That is, they would be faced with more pressure to ape the way institutions in the private sector (business, commercial and corporate institutions) operated. They were also expected to consolidate their electronic modes of education and knowledge provision by being part of the electronic information circuits. However, this prospect was costly. It implied that more money from the state had to be made available to HEIs as getting involved in marketing themselves and their programmes, and in mercantilizing the knowledge, skills and competences they offered, was an expensive enterprise. Most importantly, this prospect meant that a lot of HEIs, especially HDIs, which were then under-resourced in terms of computer and electronic equipment, would need to have their resource disadvantage thoroughly eradicated, an endeavour which was equally financially costly. If this was not done these institutions were likely to remain the postmodern Achilles' heels of the new HE system.

Another major prospect was that HEIs would no longer exclusively be centres of academic excellence: they would also have to be centres of (multiple) skills, competences and performativity or efficiency. This prospect, too, was costly as it meant expending more (state) money for the purpose of re-training and re-professionalizing academic staff in new skills and performativity. Re-training and re-professionalizing HE teaching staff was not going to be a cheap overnight enterprise.

A further major prospect was that certain HEIs would have to opt for a *private* route: to consider operating as private institutions wholly independent from state funding and its apron strings. Such a prospect, costly and complex as it was, was to be a welcome relief as it was likely to pose a challenge to state universities in terms of student enrolment; programme variation and attractiveness; academic excellence; professional competence; research and scholarly output; knowledge provision; financial sustainability and viability; and administration and management efficiency.

Finally, did a postmodern and globalized HE system truly mean the *death of the [academic] professor* and the end of the traditional classrooms? No. Instead, it meant more staff with more *professorial* skills, competences and performativity. In fact, the collapse of the metanarratives of the modernist forms of knowledge heralded by both postmodernity and globalization has implied that more academics who could invent and innovate ideas would be needed, more than ever before. So, a postmodern and global era for South Africa's HEIs signalled the *rebirth* and not the *death of the professor*. It also meant more fully resourced conventional classrooms alongside virtual classrooms since the majority of students at most HEIs still needed traditional lecturers as they were not yet computer- and electronically literate and Web-centric enough for virtual lecturers.

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# A Decade of Biomedical Research in West Africa (2005–14): A Bibliometric Analysis of the Ten Most Productive Countries in MEDLINE

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**Abstract**

The objective of this research is to determine the quantity and quality of publications in biomedical research in top-producing countries in West Africa during 2005–14 as well as the characteristics of the journals and collaborative evidence in the area. Data was drawn from MEDLINE/PubMed and Google Scholar while the impact factors of the journals were retrieved from the SCImago Journal and Country Rank portal. Quantity of publications was measured by counting the number of publications attributable to a country while h-index was extracted to measure quality. Productivity was analysed by sorting the data according to their first authors, journals and publication dates, and analysed using MS Excel and LOTKA®. Nigeria, Ghana, Senegal, Burkina Faso and Mali had the highest number of publications. In respect of productivity, apart from Côte d'Ivoire that had an α value less than 2, indicating a higher level of productivity, all other countries had an α value greater than 2. *West African Journal of Medicine* is the only journal of West African origin in the list of top ten journals where the authors from the sub-region published their papers, and it ranked tenth. Nigeria and Ghana published a lot more of their research papers in local journals in comparison with other countries, but these journals have very low mean impact factors. This study reinforces the need for improved research collaboration between the big and small countries.

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**Résumé**

L'objectif de cette recherche est de déterminer la quantité et la qualité des publications portant sur la recherche biomédicale dans les principaux pays producteurs en Afrique de l'Ouest au cours de la période allant de 2005 à 20014 ainsi que les caractéristiques des revues et des preuves de collaboration dans ce domaine. Les données ont été tirées de « Medline / PubMed » et « Google Scholar », tandis que les facteurs d'impact des revues ont été extraites de « SCImago Journal » et du portail de « Journal and Country Rank ». La quantité de publications a été mesurée en comptant le nombre de publications attribuables à un pays tandis que l'indice h a été extrait pour mesurer la qualité. La productivité a été analysée par le tri des données en fonction des noms des auteurs, des revues et les dates de publication, et analysée par l'utilisation de MS Excel et LOTKA®. Le Nigeria, le Ghana, le Sénégal, le Burkina Faso et le Mali ont eu le plus grand nombre de publications. En ce qui concerne la productivité, à l'exception de la Côte d'Ivoire qui avait une valeur α inférieure à 2 indiquant un niveau de productivité plus élevé, tous les autres pays avaient une valeur de α supérieure à 2. Le West African Journal of Medicine (Revue ouest-africaine de médecine) est la seule revue d'origine ouest-africaine figurant sur la liste des dix premières revues où les auteurs de la sous-région ont publié leurs articles, et s'est classé dixième. Comparés aux autres pays, le Nigeria et le Ghana ont publié plus d'articles de recherche dans des revues locales, mais ces revues ont une moyenne de facteurs d'impact très faible. Cette étude renforce la nécessité d'améliorer la production en matière de recherche et la collaboration des grands pays avec les petits pays.

## Introduction

Biomedicine is the branch of medicine that is concerned with the application of the principles of the natural sciences and especially biology and biochemistry in clinical medicine (Pickstone 2000; Porter 2004; Quirke and Gaudillière 2008; Lupton 2012). The ultimate aim of biomedical research is to answer questions leading to the discovery of treatment, prevention and diagnosis of diseases that cause illnesses and death. It also includes broad investigation of the underlying processes in living organisms; and determination of the effectiveness and safety of drugs, methods and devices used to diagnose, support and maintain individuals during and after treatment of diseases (European Medical Research Councils 2011). Like in other fields, publications in biomedicine are the results of research of individual scientists or 'webs' of collaborators, both foreign and local, who share their findings with the scientific community; and these publications are used to measure progress in science (Hart 2000). These publications are definitive evidence of scientific activity.

According to UNDESA (2011), South Africa, Egypt and Nigeria which are among the top ten most populous countries in Africa, are also the top producers of scientific publications in the region. Many reports show that South Africa has consistently produced more biomedical and other research output than all other African countries (Uthman and Uthman 2007; Tijssen 2007 Hofman et al. 2009).

A number of bibliometric studies have examined scientific publications in sub-Saharan Africa (Uthman et al. 2007; Tijssen 2007; Hofman et al 2009), and in some specific African countries including Nigeria (Nwagwu 2005; 2006; 2007; 2012), Malawi (Gondwe and Kavinya 2008), Libya (Bakoush et al. 2007) and Egypt (Afifi 2007). While these studies show progress in biomedical research in Africa, performance status is not yet established when disaggregated by sub-regions (Uthman and Uthman 2009). The challenges include poor infrastructure, poverty and political instability (Ondari-Okemwa 2007). According to Grant, Shelby and Kenneth (2010), only a few countries in West Africa had the capacity for carrying out advanced training in nutrition and public health. Research exists that was carried out to analyse biomedical literature in some individual countries in West Africa (Nwagwu 2006; 2007), but there is not yet a study focusing on the quality, quantity and productivity of biomedical literature in West Africa as a sub-region.

The main objective of this study is to determine the quantity, impact, publication channels and collaborative evidence in biomedical literature in top-producing countries in West Africa during 2005 to 2014. Specifically, the study is designed to:

- examine the quantity and distribution of biomedical publications by countries in West Africa during 2005 to 2014;
- determine the quality/impact of the publications;
- analyse the productivity patterns of the research in the top ten paper-producing countries;
- determine the characteristics of the most popular journals and authors.

Understanding the production and productivity patterns of the journals and authors as well as the most popular authors and most popular journals is a very important step for making informed policies that relate to research dissemination practices, sources and choices of journal in which to publish, and for the strengthening of research production and performance in West African countries. For journals, a recognized and important characteristic presently relates to whether they are available on an open access basis or not. An open access strategy of research dissemination has become the mantra of modern

science, with the potentials of boosting wider spread and use of the outcomes of researchers' endeavours among larger audiences, as well as of interesting the public more than could be achieved by the traditional print model. Open access uptake globally has really gained ground during the period under study, but it has generally been slower in the African region in comparison with other regions (Nwagwu 2013). The access status of the journals – closed or open – gives an indication of the state of take-up of the publishing model by biomedical researchers in the sub-region. It also shows evidence of the commitment of researchers and their institutions to facilitating wider spread of their publications.

## Literature Review

### *Scholarly Publications*

Scientific publications represent definitive evidence of the output of science, and bibliometrics provides the tools for understanding the characteristics of disciplines, researchers and their communities through their publications. In this regard, publications can be collected, organized, and analysed to determine the size, quality and nature of research carried out in order to measure global, local, regional and national, and, individual, group and institutional practices and trends (King 1987; Nederhof and Zwaan 1991). Bibliometricians are also concerned with the productivity of scientists, measured primarily by the number of publications authored by scholars (Moed, De Bruin and van Leeuwen 1995). Beyond counting articles, several indices, such as those of Lotka's (1926) law have been used to establish and monitor the pattern of productivity of different categories of scientists. Studies based on these metrics, both empirical and conceptual, are now relatively ubiquitous in the literature (Nwagwu 2005).

Another important issue about publications relates to whether articles are used by other researchers, or how the papers influence other researchers. To this extent, researchers always talk about citation of research papers. Metrics of citation have been used to measure research quality and impact as well as in the mapping of science; for example, impact factor and the h-index are results of quantitative manipulations of citation data. The mapping of science based on publication statistics yields very crucial information in respect of sources of influence, and relationships among disciplines, among other factors. Although citations and their metrics are very useful, their validity and reliability as measures for impact assessment have also been contentious issues. A major concern has come from the inherent limitations of citation databases – they are usually inadequate or biased in their coverage of countries, disciplines

and languages of researchers (Bordons, Fernandez and Gomez 2002; van Leeuwen et al. 2001; Bollen et al. 2009). There also exist ambiguities and confusions caused by abbreviations and ordering of names of authors which make it difficult to attribute an article to one or more authors (Weingart 2005). These questions notwithstanding, the issue of what the impact of scholarly research means exactly and how citation data measure impact are still used to understand quality of research. These challenges notwithstanding, many efforts aimed at studying the quality of research have for a long time focused on data gathered at group levels such as institutions, disciplines and, countries, and so the Thomson Reuter's Impact Factor comes in handy. But Hirsch (2005) devised a means of measuring the quality of scientific publications that is usable at group and individual levels known as the h-index. Several studies have been carried out either using the Hirsch-index to evaluate research or to validate the approach (Hirsch 2005; 2007; Meho 2007; Bartneck and Kokkelmans 2011; Ferrara and Romero 2013).

## Scientific Collaboration

Collaboration, often measured by co-authorship or the number of authors that write a single paper is also a very important index in understanding the characteristics of publications. Who an author collaborates with, his or her status in the collaboration in terms of roles played as may manifest itself in the position of the author on the paper and the country of origin are important indices in studying the complexity of subjects, social interaction among scholars, sources of influence and so forth. Several studies have shown the significance of co-authorship in science, particularly in biomedicine where the practice is very heavy (King 2009). Many explanations have been proffered for this observation, which border mainly on the complexity of the structure and ethnography of the field of biomedicine. Some of the explanations are structural. For instance, Cronin (2001) has observed that biomedical practice requires intense socialization and oral communication, and so do all aspects of its organizational structure and value system. King also added that biomedical research often involves multi-level processes of decision-making and cross-examination of the decisions; the discipline has a very strong apprenticeship system and thrives with practitioners working in groups. Also, in biomedical research, reliance on expert advice and control is usually strictly adhered to. As a result, the field is mentor-driven because it often involves extensive supervision from superior experts and team participation is required among peers.

Very crucially and related to the above, biomedical research focuses on human lives directly or indirectly, and this reinforces the extensive supervision requirement of the field (King 2000). In most instances, biomedical scientists

work in closed groups with a single supervisor monitoring a relatively large number of apprentices in different groups. Even long after training, medical practice is usually carried out in teams, whose composition often reflects both different levels of expertise and apprenticeship, and this promotes collaboration. Related to the above, King (2000) had observed that biomedicine is also becoming increasingly multidisciplinary, often requiring multi-expert inputs and interaction.

**Bibliometric Study of Biomedical Literature in Africa**

Various bibliometric studies have been carried out on biomedical literature in Africa. For instance, Nwagwu (2006) carried out a bibliometric study of the quantity and quality of Nigeria's biomedical literature during the period 1962–2002, using data from PubMed. He found that about 52 per cent of all the journals that published papers on Nigeria did so only once each, whereas 48 per cent appeared more than once in the bibliography. Nwagwu established non-discrimination in biomedical researchers' use of channels, and suggested that this could be a result of a scramble to publish in any source that is willing to accept their papers, as well as an indication of the difficulty with which biomedical papers on Nigeria find their ways into international mainstream sources. Nwagwu observed that the trend signifies that biomedical research in Nigeria was growing in multi-disciplinarity, requiring more and more multi-expert input and interactions.

Shortly after Nwagwu's study, Uthman and Uthman (2007) examined publication trends on HIV/AIDS in Africa by first authors between 1996 and 2005 and found that South Africa, Egypt and Nigeria were the most productive countries in terms of absolute number of publications indexed by PubMed. Owolabi, Bower and Ogunniyi (2007) and Hofman *et al.* (2009) had similar observations when they showed that South African and Nigerian researchers had higher output in biomedical literature compared to researchers from other sub-Saharan Africa countries. Uthman and Uthman (2007) also showed that South Africa and Gambia had the best performance based on number of research articles relative to Gross Domestic Product (GDP). They also observed that there was a continuous increase, and reassuring trends, in the production of research articles from all Africa's sub-regions even though the gross contributions of the region to global research production was rather limited. They concluded that for African countries to achieve prolonged significant growth in biomedical research requires embarking on economic catch-up trajectories, sustained capacity building, investments and upgrading of their science bases. Following Uthman and Uthman (2007), Ramos *et al.* (2008) studied tuberculosis literature in the region and showed that Gambia, Malawi and Guinea

Bissau were the most productive countries when the data was normalized by GDP. In another study, Uthman (2008) found that Nigeria has achieved a significant increase in the number of SCI publications and collaborations in HIV literature. Over 85 per cent of the articles were published in collaboration with two or more authors.

Boshoff (2009) introduced a new dimension in the effort to understand the structure of biomedical research in Africa region by investigating how neocolonialism manifests in research activities using structure of co-authorship of research papers in Central Africa, and focusing on participation of authors from the North. He found that 80 per cent of papers from Central Africa were co-authored with authors from outside the region, and that 46 per cent of the papers have co-authors from Europe while 35 per cent were co-authored with authors from the former colonial power, France. In a similar study, Boshoff (2010) investigated how researchers in the fifteen countries in the Southern African Development Community (SADC) and other parts of Africa collaborated to conduct research during 2005–08. He found that when researchers in SADC collaborated, only 3 per cent of such research was jointly-authored by researchers from SADC countries and 5 per cent of those papers were jointly authored with researchers from other African countries outside SADC. On the other hand, 47 per cent of research from SADC was as a result of collaboration with scholars from high income countries, who also constituted the co-authors in most intra-regional and continental papers authored by SADC researchers. According to Boshoff, South African researchers dominated in co-authoring papers both in the continent and in the region. It should however be remarked that Boshoff's research focused on scientific research generally, and not on biomedical research.

The study of Grant, Shelby and Kenneth (2010) focused on West Africa, and analysed peer-reviewed articles on key public health nutrition topics, namely infant and young child feeding practices, selected micro-nutrient deficiencies, and the emerging problem of overweight and obesity. The data was collected from MEDLINE/PubMed and covered the period 1998 to 2008. Their result showed that the sub-region produced an average of 3,796 articles per year during the period. They showed that institutions located outside Africa provided primary authors for 46 per cent of the publications. They showed further that articles in English dominated other languages as they accounted for 90 per cent of the total number of articles, and that most of the studies were cross-sectional in nature. They concluded that despite the huge burden of nutritional challenges in the sub-region, evidence from peer reviewed literature suggests an insufficient attention to research in the area.

Chuang *et al.*'s (2011) study took a different perspective by assessing the bibliometric characteristics of public health-related research articles published

by researchers in African institutions by checking for significant variation across regions in Africa. He discovered that the growth in the number of public health-related articles by researchers in African institutions had been promising; and the pattern of growth is expected to continue. He stated that several factors, like the global responses to AIDS launched by WHO in 1987, funding supports by donor agencies such as the IMF, World Bank and NGOs (local and international) greatly influenced how public health researchers' conducted their studies. Also, they found that the increase in international collaboration played a major role in the upward trend of the number of articles being published in public health, an observation he attributed to the dominance of French and English languages in the region.

Jonathan Christopher and Daniel (2010) showed that Nigeria plays an important connecting role in the collaborative network between Anglophone speaking countries and other African countries, although the connections were weak between neighbouring West African countries and strong with South Africa. They reported that Malawi, which has one-tenth of the annual research output of Nigeria, produced research of high quality that exceeded the world average benchmark while Nigeria hovered around half that impact level. Furthermore, they found that there was a pair of axes running between Nigeria and Kenya which engaged a high proportion of Africa's research and linked the rest of the continent in collaborative networks. A study on a different subject matter altogether that examined the geography of Africa's cyberspace also linked Nigeria and Kenya in a network of web links (Nwagwu and Ibitola 2010). Jonathan Christopher and Daniel (2010) recognized that despite Nigeria's relative advantage in terms of GDP, Nigeria was not producing as much research as would be expected given the size of its economy, and that the value of its resources was not yet being felt in its knowledge base (Uthman 2009).

Linking the current ranking of scholarship with scientific productivity, Uthman (2010) found that the better the economic ranking of a country, the higher the quantity of its research productivity. He observed however that even though Nigeria was ranked fifth in Africa in terms of the relative contribution to the total number of articles indexed in PubMed, it had a low number of PubMed publications relative to its GDP. Focusing on a subject area, Harande (2011) examined the increasing diabetes-related literature in Nigeria between 1996 and 2009, and analysed the list of periodicals to show a rapid expansion and growth in the publication of diabetes-related research in Nigeria. However, he suggested that more collaborative efforts needed to be exercised by medical doctors, health and allied workers to combat the menace of this disease. A very crucial aspect of this research relates to the sources through which researchers disseminated their work (Sweet *et al.* 2014).

## Research Methodology

### *Scope of the Study, Population and Sample*

The study focuses on West Africa, a sub-region with an estimated population of 314 million (UNDESA 2011) and comprising sixteen countries (Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, Togo). Fifteen of these countries (minus Mauritania) belong to the Economic Community of West African States (ECOWAS). This study covers top article-producing countries in the ECOWAS members of the sub-region. Data for the study spans 2005–14, a period selected to reflect the most current situation in biomedical research in the sub-region. This period has also seen serial conflicts in many of the countries: wars in Liberia, Côte d'Ivoire and Sierra Leone, and political and religious crisis in Mali and Nigeria. Conflicts disrupt peace and security, and often dismantle academic activities and dissemination of research.

Data was drawn from:

- MEDLINE/PubMed, a free online bibliographic database of the National Library of Medicine (NLM) in the US.
- The h-index and the number of citations of authors retrieved from Google Scholar. Google Scholar provides total citation count, total number of cited publications and Jorge E. Hirsch's index (h-index).
- The impact factors of the journals were retrieved from the SCImago Journal and Country Rank portal, that includes the journals and country scientific indicators developed from the information contained in the Scopus® database.

To retrieve the publications of authors from the various countries in MEDLINE/PubMed, the title field and the publication date field were combined. Names of the countries and dates of coverage of the study, namely 2005 and 2014, were entered into the title field of MEDLINE/PubMed. The search function looks thus: ("Country" [Title]) and ("2005/01/01" [Date – Publication]: "2014/12/31" [Date – Publication]). For instance, to search for publications on Nigeria, the researcher merely used the following search function: (Nigeria [Title]) and ("2005/01/01"[Date – Publication]: "2014/12/31"[Date – Publication]). To obtain data from SCImago Journal and Country Rank, the names of the authors or journals, as the case may be, were entered into the websites.

## Data Management and Analysis

First, data retrieved from all the fifteen countries was sorted according to their first authors, and thereafter entered into Microsoft Excel for further analysis. The initial result was displayed in frequency distributions, percentages and tables. Authors were listed and ranked according to the number of papers they produced and according to their impact factors.

Further analysis was carried out to measure productivity using LOTKA®, a free online software designed by Rousseau and Rousseau in 2001. Rousseau and Rousseau's software follows Nicholls' methodology: organization of the data in a size-frequency form, using all the data without truncation, estimation using the maximum likelihood approach and then testing, performed using Kolmogorov-Smirnov test statistic. LOTKA® compares the Kolmogorov-Smirnov (K-S) maximum difference statistic (|D-Max|) with the K-S table values at 0.01, 0.05 and 0.1 significance levels and given degrees of freedom. Productivity will not observe LOTKA's distribution if (|D-Max|) < K-S value at the various levels of significance. It was considered necessary to adjust the number of publications per country by the population of the countries in order to make data management easier. This was obtained by taking the ratio of the number of publications by 100,000 populations.

Lawani (1980) introduced the collaboration index (CI) which he defined as the average number of authors per article. This index did not consider the effect of the single-authored articles in the index. A new index, namely degree of collaboration, was devised in 1983 by Subramanyam (1983). Subramanyam defined this index as the ratio of single-author articles to the total number of articles. This technique was also found to be deficient because it does not differentiate the multiple-author articles when the number of authors varies. In 1988, Ajiferuke, Burell and Tague introduced the collaborative coefficient (CC). CC works by conferring a ratio to 1/j to each paper with j being the number of authors; subtraction of the sum of the score of all articles from 1 makes the CC index (Tague, Burell and Ajiferuke 1988). They showed that the collaborative coefficient had the advantages of previous indices. This index differentiates various levels of multiple authorships. When single-author articles are in the majority, this index will trend toward zero. The collaborative coefficient (CC) is given as:

$$CC=\sum(1/j)P(X=j), \text{ where,}$$

X=number of authors, j=number of authors responsible for a paper during a certain period.

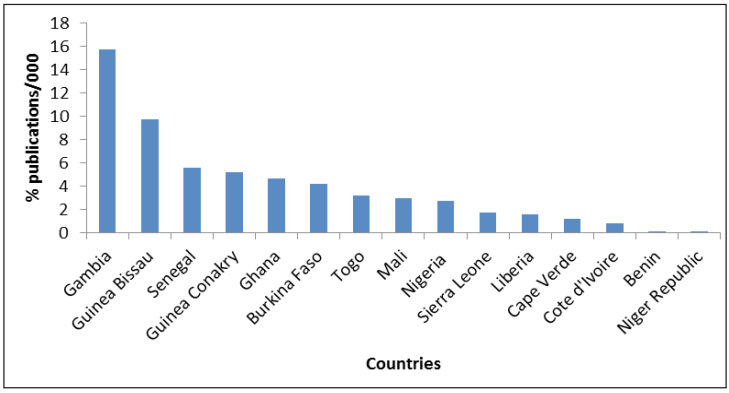
## Result

*General distribution of publications*

A total of 4,946 unique authors were identified in the fifteen countries, and they produced 8,560 articles. Table 1 shows the number of publications per country per year for the fifteen ECOWAS member countries. Altogether, Nigeria produced 51.6 per cent of all articles coming from the sub-region, thus

making this the country with the highest number of publications, followed by Ghana with 13.7 per cent articles while Senegal had the third highest publications with 8.34 per cent. Burkina Faso, Mali and Gambia had 8.27, 5.43 and 2.43 per cent of articles respectively.

**Figure 1**: Publication/population (%/100,000)




Benin Republic made a unit contribution or 0.011 per cent of the sub-regional total. Contributions of forty-two and twenty-six or 0.54 and 0.3 per cent were made by Cape Verde and Guinea Conakry respectively.

In respect of publication per population, Figure 1 shows further that Gambia had the highest publications per population with about sixteen articles published for every 100,000 Gambians. Guinea Bissau had the next highest number of publications per population (ten articles per 1,000 population) followed by Senegal (six articles per 100,000 population). Ghana, Burkina Faso and Togo are fourth, fifth and sixth with about 5, 4 and 3 per cent respectively. Nigeria is located in eighth position with less than three papers per 100,000 persons.

## Distribution of Contributions by Authors

Table 2 shows the distribution of papers by authors per country; that is the number of authors producing 1,2, 3... n papers. Considered together 69.12 per cent of the authors produced only one paper each. Only 15.12 per cent produced two papers each, while 14.09 per cent produced three papers each – the peak of the average of number of papers per author for the sub-region. A comparison across the countries shows some disparity. Côte d'Ivoire has the highest number proportion of authors (88.41 %) who produced only one paper during the period while Nigeria has the least (66.55 %). Furthermore, only one author in Nigeria the highest producer and across the sub-region – was able to produce twenty-nine articles.

**Table 1**: Frequency Distribution of Publications per Country per Year

| Countries | Total no. of Publications (%) | No. of publications per year for the whole countries | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **2005** | **2006** | **2007** | **2008** | **2009** | **2010** | **2011** | **2012** | **2013** | **2014** |
| Nigeria | 4,479 (52.32) | 265 | 247 | 291 | 360 | 399 | 493 | 563 | 651 | 665 | 766 |
| Ghana | 1,169 (13.66) | 61 | 80 | 85 | 88 | 113 | 137 | 145 | 144 | 200 | 268 |
| Senegal | 714 (8.34) | 57 | 57 | 48 | 79 | 67 | 70 | 85 | 99 | 88 | 101 |
| Burkina Faso | 708 (8.27) | 43 | 55 | 46 | 47 | 70 | 89 | 88 | 100 | 113 | 105 |
| Mali | 465 (5.43) | 29 | 23 | 32 | 50 | 44 | 70 | 55 | 58 | 69 | 68 |
| Gambia | 280 (3.27) | 24 | 26 | 22 | 30 | 31 | 22 | 35 | 26 | 36 | 38 |
| Togo | 195 (2.28) | 10 | 18 | 10 | 14 | 17 | 26 | 24 | 23 | 29 | 42 |
| Côte d'Ivoire | 159 (1.86) | 18 | 20 | 21 | 10 | 17 | 14 | 15 | 20 | 16 | 17 |
| Guinea Bissau | 151 (1.76) | 14 | 7 | 15 | 18 | 14 | 22 | 20 | 12 | 22 | 20 |
| Sierra Leone | 104 (1.21)_ | 9 | 6 | 7 | 11 | 8 | 12 | 8 | 9 | 17 | 21 |
| Liberia | 66 (0.77) | 3 | 9 | 1 | 4 | 9 | 3 | 5 | 4 | 14 | 16 |
| Cape Verde | 42 (0.50) | 3 | 1 | 2 | 7 | 3 | 5 | 0 | 3 | 6 | 15 |
| Guinea Conakry | 26 (0.30) | 0 | 2 | 1 | 5 | 3 | 3 | 2 | 3 | 4 | 3 |
| Benin | 1 (0.01) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Niger Republic | 1 (0.01) | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **8,560 (100)** | **536** | **551** | **581** | **723** | **796** | **966** | **1,045** | **1,153** | **1,279** | **1,480** |

**Table 2**: Distribution of Papers by Number of Authors

| No. of contributions | Nigeria | | Ghana | | Senegal | | Burkina Faso | | Mali | | Gambia | | Togo | | Côte d'Ivoire | | Guinea Bissau | | Sierra Leone | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | No. of authors | % | No. of authors | % | No. of authors | % | No. of authors | % | No. of authors | % | No. of authors | % | No. of authors | % | No. of authors | % | No. of authors | % | No. of authors | % |
| 1 | 1,596 | 66.55 | 596 | 77.71 | 313 | 71.62 | 279 | 66.75 | 233 | 75.40 | 133 | 69.27 | 83 | 73.45 | 122 | 88.41 | 63 | 70.00 | 70 | 83.33 |
| 2 | 397 | 16.55 | 95 | 12.39 | 62 | 14.19 | 74 | 17.70 | 41 | 13.27 | 39 | 20.31 | 13 | 11.50 | 12 | 8.70 | 13 | 14.44 | 10 | 11.90 |
| 3 | 191 | 7.96 | 38 | 4.95 | 30 | 6.86 | 40 | 9.57 | 18 | 5.83 | 15 | 7.81 | 4 | 3.54 | 3 | 2.17 | 6 | 6.67 | 4 | 4.76 |
| 4 | 77 | 3.21 | 16 | 2.09 | 11 | 2.52 | 7 | 1.67 | 8 | 2.59 | 1 | 0.52 | 4 | 3.54 | 1 | 0.72 | 5 | 5.56 | 0 | 0.00 |
| 5 | 42 | 1.75 | 8 | 1.04 | 12 | 2.75 | 8 | 1.91 | 3 | 0.97 | 4 | 2.08 | 6 | 5.31 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 6 | 29 | 1.21 | 4 | 0.52 | 6 | 1.37 | 2 | 0.48 | 3 | 0.97 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 1 | 1.11 | 0 | 0.00 |
| 7 | 21 | 0.88 | 3 | 0.39 | 2 | 0.46 | 3 | 0.72 | 1 | 0.32 | 0 | 0.00 | 2 | 1.77 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 8 | 14 | 0.58 | 4 | 0.52 | 0 | 0.00 | 3 | 0.72 | 1 | 0.32 | 0 | 0.00 | 1 | 0.88 | 0 | 0.00 | 1 | 1.11 | 0 | 0.00 |
| 9 | 5 | 0.21 | 1 | 0.13 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 1 | 1.11 | 0 | 0.00 |
| 10 | 9 | 0.38 | 0 | 0.00 | 0 | 0.00 | 1 | 0.24 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 11 | 3 | 0.13 | 0 | 0.00 | 0 | 0.00 | 1 | 0.24 | 1 | 0.32 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 12 | 1 | 0.04 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 13 | 3 | 0.13 | 2 | 0.26 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 14 | 5 | 0.21 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 15 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 16 | 3 | 0.13 | 0 | 0.00 | 1 | 0.23 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 17 | 1 | 0.04 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| 29 | 1 | 0.04 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 |
| **Total** | **2,398** | **100** | **767** | **100** | **437** | **100** | **418** | **100** | **309** | **100** | **192** | **100** | **113** | **100** | **138** | **100** | **90** | **100** | **84** | **100** |

Specific country situations present some disparity. Table 2 shows further that for Nigeria, 67 per cent of the 2,398 scientists contributed just one article each while about 17 per cent contributed only two items each and about 8 per cent contributed three articles each. An estimated 8 per cent of the total authors made between four and nine contributions while approximately 1 per cent of the authors in the bibliography contributed at least ten items each.

The total number of authors from Ghana was 767, constituting 15.5 per cent of the total authors in the study. About 78 per cent of the scientists in this country made just one contribution each while less than 13 per cent made two contributions each, and about 5 per cent made three contributions each. More than 4 per cent of the authors contributed between four and nine items. A total of 437 scientists contributed one or more articles in Senegal with about 72 per cent of the scientists producing one item each while about 14 per cent produced two items each, and more than 6 per cent produced three items each. About 7 per cent produced between four and ten items while less than 1 per cent produced at least ten items. It is observed from Table 3 that 418 scientists emanated from Burkina Faso. About 66.75 per cent of these scientists produced one item each while about 17.7 per cent produced two items each, and more 9 per cent produced three items each. About 6 per cent produced between four and ten articles while less than 1 per cent produced at least ten items while Mali had a total of 309 scientists producing one or more items. About 75 per cent produced one item each while less than 14 per cent produced two items each and three items were produced by more than 5 per cent of the scientists. More than 5 per cent of the scientist produced between four and ten articles.

**Scientific Productivity**

Table 3 contains results on productivity of the authors, using Lotka's statistics. The table shows the maximum differences (D-Max), the beta values (α) which indicate the level of productivity of authors, the C-Values (k) which indicate the number of authors making one contribution only, and Kolmogorov-Smirnov statistics indicating the significance of the test at 1, 5 and 10 per cent. The result indicates that $\alpha=2.33$ for Nigeria, while its intercept (k) is 70.57 per cent. Compared with a theoretical threshold of $\alpha=2$, the result suggests a low proportion of highly productive scientists in Nigeria and a high proportion of biomedical scientists with a single contribution (k=70.57 per cent). For Ghana, Table 3 further shows that the number of scientists that contributed just one item each is 78.83 per cent, and, $\alpha=2.72$ also suggesting a low productivity of biomedical literature in Ghana.

**Table 3**: Scientific Productivity of Authors in Selected African Countries

| Country | DMax | N | C-Value | Beta(α) | Kolmogorov-Smirnov statistics | | |
|---|---|---|---|---|---|---|---|
| | | | | | 1% | 5% | 10% |
| Côte d'Ivoire | 1 | 138 | 0.000 | 1.260 | 0.139 | 0.116 | 0.104 |
| Nigeria | 0.040 | 2398 | 0.706 | 2.329 | 0.033 | 0.028 | 0.025 |
| Burkina Faso | 0.053 | 418 | 0.721 | 2.391 | 0.079 | 0.067 | 0.059 |
| Guinea Bissau | 0.028 | 90 | 0.728 | 2.422 | 0.172 | 0.143 | 0.129 |
| Togo | 0.034 | 113 | 0.735 | 2.453 | 0.153 | 0.128 | 0.115 |
| Senegal | 0.027 | 437 | 0.743 | 2.489 | 0.078 | 0.065 | 0.058 |
| Sierra Leone | 0.049 | 84 | 0.751 | 2.526 | 0.167 | 0.139 | 0.125 |
| Gambia | 0.066 | 192 | 0.759 | 2.564 | 0.118 | 0.098 | 0.088 |
| Mali | 0.019 | 309 | 0.773 | 2.636 | 0.093 | 0.077 | 0.069 |
| Ghana | 0.011 | 767 | 0.788 | 2.720 | 0.059 | 0.049 | 0.044 |

***Most Prolific Authors***

Table 4 contains the list of the most prolific authors measured by absolute number of papers written by them, in addition to the Hirsh index and citation counts. It should be noted that the h-index represents the gross standing of the authors in terms of their productivity, and not only in respect of biomedical research. It could be observed that Nigeria dominated the list of ten most productive authors, producing nine authors while a Senegalese author is the tenth. Onwujekwe from Nigeria is the most productive biomedical author with twenty-nine publications, followed by Onyeaso, also from Nigeria with seventeen, and Ndiaye from Senegal with sixteen. Cadmus (16), Uneke (16), Oshikoya (16), Adewuya (14), Olusanya (14), Omokhodion (14) and Desalu (14) all from Nigeria completed the top ten positions.

**Table 4**: Top Ten most Productive Authors in Selected West African Countries

| Rank | Name of authors | No. of publications | H–index (all papers) | No. of citations | Country |
|---|---|---|---|---|---|
| 1 | Onwujekwe, O. | 29 | 22 | 1,480 | Nigeria |
| 2 | Onyeaso, C. O. | 17 | 12 | 441 | Nigeria |
| 3 | Ndiaye, P. | 16 | 39 | 5,256 | Senegal |
| 4 | Cadmus, S.I. | 16 | 13 | 703 | Nigeria |
| 5 | Uneke, C.J. | 16 | 12 | 467 | Nigeria |
| 6 | Oshikoya, K.A. | 16 | 9 | 184 | Nigeria |
| 7 | Adewuya, A.O. | 14 | 19 | 930 | Nigeria |
| 8 | Olusanya, B.O. | 14 | 15 | 773 | Nigeria |
| 9 | Omokhodion, F. | 14 | 12 | 365 | Nigeria |
| 10 | Desalu, O.O. | 14 | 8 | 252 | Nigeria |

Table 5 shows the top ten high-impact authors and their countries of origin in the selected countries measured by h-index, as at 2014. It is observed that Hill from Ghana had the highest h-index of 208 and received 52,443 citations while Roth from Guinea Bissau had h-index value of 146 and received 37,565 citations. Moore from Togo and Bowman from Gambia both had h-index values of 90 and 89, and received 92,669 and 34,216 citations respectively while Culp from Gambia, Adjei from Ghana and Aaby from Guinea Bissau are joint-tenth with h-index values of 58 each, and 20,933, 9,534 and 8,337 citations respectively.

**Table 5:** Top Ten High-impact Authors in West Africa

| Rank | Names of authors | No. of publications | H-index in all papers | No. of citations for all papers | Country |
|---|---|---|---|---|---|
| 1 | Hill, Z. | 7 | 208 | 52,443 | Ghana |
| 2 | Roth, A. | 4 | 146 | 37,565 | Guinea Bissau |
| 3 | Moore, A. R. | 5 | 90 | 92,669 | Togo |
| 4 | Bowman, R.J. | 3 | 89 | 34,216 | Gambia |
| 5 | Burton, M.J. | 5 | 80 | 38,667 | Gambia |
| 6 | Fisher, T.K. | 4 | 83 | 53,915 | Guinea Bissau |
| 7 | Kirby, M.J. | 5 | 78 | 34,429 | Gambia |
| 8 | Hill, P.C. | 5 | 77 | 61,629 | Gambia |
| 9 | Muller, O. | 7 | 70 | 13,279 | Burkina Faso |
| 10 | Culp, K. | 3 | 58 | 20933 | Gambia |
| 10 | Adjei, A.A. | 13 | 58 | 9534 | Ghana |
| 10 | Aaby, P. | 9 | 58 | 8337 | Guinea Bissau |

***Ten Most High-impact Journals used by Biomedical Authors from West Africa***

Table 6 presents the ten highest impact journals measured by impact factors; it also shows the number of articles published in the journals, the countries of origin of the authors and the countries of origin of the journals. It can be seen that *The Lancet*, a United Kingdom (UK)-based journal, is the most prestigious journal in which West African authors published their research. Authors from Sierra Leone and Gambia published six and five articles in *The Lancet* respectively. Burkina Faso and Guinea Bissau published eleven and six articles respectively in *Journal of Infectious Diseases*, which is the next high ranking journal of choice to West African authors; it has JIF of 0.831 and ranked second. The *AIDS* journal in the United States (US) has a JIF of 0.709 and two countries, Guinea Bissau and Gambia, published in it. While *PLoS One*, a US-based journal has a JIF of 0.519 and authors from three countries, namely Gambia, Mali and Guinea Bissau, published in it. Authors from Gambia, Guinea Bissau and Mali respectively published in *Emerging Infectious Diseases* (0.476), *Bulletin of the World Health Organisation* (0.428), *Euro Surveillance; Bulletin Européen sur les maladies transmissibles* (European Communicable Disease Bulletin (0.375), *Vaccine* (0.369) and *PLoS Neglected Tropical Diseases* (0.362).

**Table 6**: Number of Publications in the Top Ten Journals by Impact Factor

| Rank | Name of journal | SCIMago Journal Report | No. of publications | User countries | Journal's country of origin |
|---|---|---|---|---|---|
| **1** | *Lancet* | 1.486 | 6 and 5 | SL and GM | UK |
| **2** | *Journal of Infectious Diseases* | 0.831 | 11and 6 | BF and GW | US |
| **3** | *AIDS* | 0.709 | 6 and 5 | GW and GM | US |
| **4** | *International Journal of Epidemiology* | 0.527 | 6 | GW | UK |
| **5** | *PLoS One* | 0.519 | 11, 8 and 7 | GM, ML and GW | US |
| **6** | *Emerging Infectious Diseases* | 0.476 | 16 | SN | US |
| **7** | *Bulletin of the World Health Organisation* | 0.428 | 6 | GM | Switzerland |
| **8** | *Euro Surveillance; Bulletin Européen sur les maladies transmissibles (European Communicable Disease Bulletin)* | 0.375 | 5 | GM | France |
| **9** | *Vaccine* | 0.369 | 9 | GW | Netherlands |
| **10** | *PLoS Neglected Tropical Diseases* | 0.362 | 9 | ML | US |

Key: GW= Guinea Bissau, ML= Mali, BF= Burkina Faso, GM= Gambia, SL= Sierra Leone, SN= Senegal.

It could also be observed that among the ten countries in the study, Guinea Bissau and Gambia both had the widest spread of their papers, publishing in five of the top ten journals, Mali published in two while Sierra Leone, Burkina Faso and Senegal published in one journal each. Five of the ten journals originated from the US while two originated from the UK and the remaining were from Switzerland, France and the Netherlands. The most populous countries, namely Nigeria and Ghana, are absent in the list of users of the top ten high-impact factors journals in which West African authors published.

***Most Popular Journals by Country***

Table 7 presents the frequency distribution of the ten most popular journals used by authors in the countries assessed by number of publications and by the number of countries publishing in the journals. The top ten journals accounted for 1,006 or about 12 per cent of the 8,424 publications emanating from the ten countries in the sub-region. Six of the journals, *Plos One*, *Transactions of the Royal Society of Tropical Medicine*, *American Journal of Tropical Medicine*, *Malaria Journal*, *Tropical Medicine and International Health* and *West African Journal of Medicine*, were English and they originated from UK, US and Nigeria while the other four were French. Only one of the journals, *West African Journal of Medicine* based in Nigeria, originated from a country in the sub-region. A French journal, *Medicine Tropicale* published 196 papers, the highest number of papers published in a single journal by scholars in the sub-region – French is the dominant language of the sub-region.

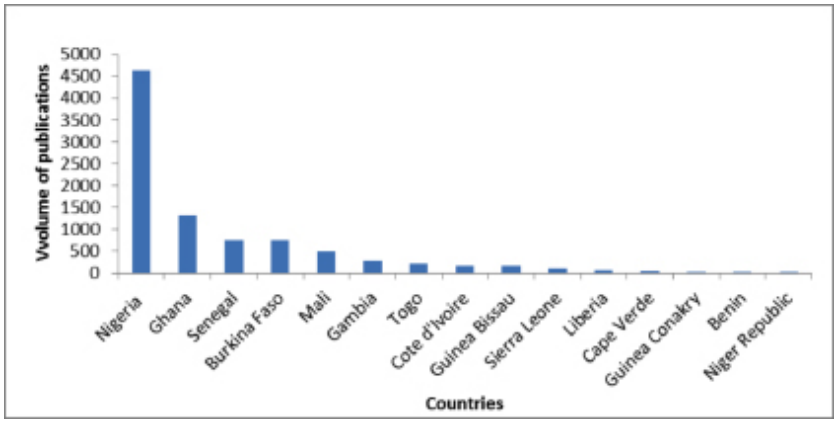
**Table 7**: Top Ten most Popular Journals in West Africa

| Rank | Journals | GW | GH | SN | BF | ML | GM | TG | CI | NG | SL | NoC | TNoP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *1* | *Medecine Tropicale* | 0 | 0 | 82 | 27 | 23 | | 38 | 26 | 0 | 0 | 5 | 196 |
| *2* | *West African Journal of Medicine* | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 164 | 0 | 2 | 185 |
| *3* | *Tropical Medicine and International Health* | 6 | 51 | 12 | 42 | 9 | 12 | 0 | 0 | 0 | 3 | 7 | 135 |
| *4* | *Bulletin de la Société de Pathologie Exotique* | 0 | 0 | 41 | 35 | 18 | 0 | 10 | 11 | 0 | 0 | 5 | 115 |
| *5* | *Malaria Journal* | 0 | 29 | 26 | 27 | 19 | 10 | 0 | 0 | 0 | 3 | 6 | 114 |
| *6* | *American Journal of Tropical Medicine and Hygiene* | 0 | 34 | 12 | 15 | 21 | 7 | 4 | 0 | 0 | 2 | 7 | 95 |
| *7* | *Transactions of the Royal Society of Tropical Medicine and Hygiene* | 5 | 29 | 15 | 0 | 0 | 8 | 0 | 0 | 0 | 4 | 5 | 61 |
| *8* | *Sante* | 0 | 0 | 15 | 31 | 0 | 0 | 11 | 0 | 0 | 0 | 3 | 57 |
| *9* | *PloS One* | 7 | 0 | 0 | 0 | 8 | 11 | 0 | 0 | 0 | 0 | 3 | 26 |
| *10* | *Médecine et Maladies Infectieuses* | 0 | 0 | 11 | 0 | 0 | 0 | 6 | 5 | 0 | 0 | 3 | 22 |

Key: GW=Guinea Bissau, GH=Ghana, SN=Senegal, BF=Burkina Faso, ML=Mali, GM=Gambia, TG=Togo, CI=Côte d'Ivoire, NG=Nigeria, SL=Sierra Leone, NoC=number of citations; TNoP=total number of publications.

This number of papers was contributed by authors from five countries: Senegal, Burkina Faso, Mali, Togo and Côte d'Ivoire. Nigerian authors published their largest number of papers in the *West African Journal of Medicine*, hosted in Nigeria. As would be expected, authors from English-speaking countries published in only English journals but authors from French-speaking countries published mainly in French journals. It could be observed that some of the French-speaking countries such as Senegal, Burkina Faso and Mali published articles in English journals such as *Tropical Medicine and International Health* and *Malaria Journal.* On the contrary, only authors from Togo put seventeen articles in two French journals; other English-speaking countries such as Nigeria, Gambia and Ghana published strictly in English journals.

**Figure 2**: Volume of contributions to the top ten journals by the top ten countries




In terms of spread, the French-speaking countries distributed their papers among the top ten journals including English journals. For example Senegal and Burkina Faso distributed their papers among eight and six of the ten journals respectively, including in English journals; all Nigeria's papers were channelled only to one journal; Ghana spread its papers across five journals but they were all English journals. This might explain why the French-speaking countries have the highest number of papers in the top ten journals, with Senegal leading with 214 papers while Burkina Faso follows with 177.

**Most Popular Journals**

A country-by-country analysis of the top ten channels through which the researchers published articles in the various countries presents an interesting result (see Appendices 1–10). Appendix 1 shows that biomedical researchers from Guinea Bissau did not publish in any journal in their country, nor did they publish in any journals of African origin. Rather, they published in five journals in the UK, four in the US and one in the Netherlands. The mean impact factor of the journals in which the scholars published is 0.41. Guinea Bissau scholars also published in *PloS One*, a frontline open access channel.

A single Ghanaian journal *Ghana Medical Journal* whose impact is not listed in SJR was the major channel of Ghanaian biomedical research; biomedical scholars from Ghana also published in two journals that originated from Nigeria: *African Journal of Reproductive Health*, *West African Journal of Medicine*, and a Kenya-based journal *East African Medical Journal.* Bedsides the Ghanaian journal, the three African journals where Ghanaian scholars published had the lowest impact factors in SJR. Four of the Ghanaian scholars' choice journals originated from the UK while one journal each from the US and the Netherlands were also used to disseminate their research findings. The mean impact factor of journals in which Ghanaian scholars published is 0.136. As at 2011, none of the choice journals of Ghanaian biomedical researchers were available as open access channels (see Appendix 2).

A Senegalese journal *Dakar Medical* was the only journal of African origin where scholars from Senegal published their research papers. Although Senegal is a French-speaking country, five of the journals in which Senegalese scholars published were English; other papers were spread across German, Dutch and French journals. The journals in which Senegalese scholars published have a mean of 0.157. None of the journals was an open access journal (see Appendix 3).

Scholars from Burkina Faso, a French-speaking country, published in six English journals located in the US, UK and the Netherlands. The other channels were located in Belgium, France, Pakistan and Germany. Burkinabe scholars neither published in a journal in Burkina Faso nor in any other African country. With an overall mean impact factor of 0.206, none of the journals is open access (see Appendix 4).

Malian scholars have similar publishing characteristics with those in Burkina Faso. Though a French speaking country, six of the top ten journals in which they published were English while the rest came from Belgium, the Netherlands and Germany. Unlike other countries in this analysis, a Malian journal *Mali Medical* was the major channel of disseminating Malian medical research papers, although the journal's impact factor is not listed in SJR. The

overall mean impact factor of the top ten journals of choice of Malian scholars is 0.190 (see Appendix 5). Eight of the ten choice journals of biomedical researchers from the Gambia were English journals originating from the UK, US and Switzerland. The researchers did not publish in any Gambian journal or in any other African journal. Altogether, the top ten journals have a mean impact of 0.460, and one of the journals is open access (see Appendix 6). Gambia is the only country among the top ten in which *Plos One*, an open access journal, is listed.

Togo is an English-speaking country, and four of the ten top journals used by scholars from the country are French, based in Mali, Belgium, the Netherlands and France. Indeed, a French journal, *Medecine Tropicaine* constituted a major channel for Togolese scholars. Unlike Burkina Faso, this did not publish in any African channel, Togolese scholars published in a Malian journal. The mean of the journals is as low as 0.099 (see Appendix 7). Of all the French-speaking countries in the sub-region, Côte d'Ivoire published in more French journals than the others – six, altogether – based in Senegal, France, Belgium, Germany and the Netherlands. The Senegalese journal in the list, *Odontostomatol Tropicale,* did not have any impact factor listed in SJR. The mean of the impact factors of the journals is 0.112. Just like Burkina Faso, Senegalese researchers did not publish in any African journal, except based in Senegal; none of the top ten journals of Senegalese scholars' choice is open access (see Appendix 8).

More than scholars in any other West African country, six of the top ten journals in which Nigerian scholars published were Nigerian in origin. They also published in another African channel, namely the Ugandan-based *African Health Sciences Journal*. All the journals in which these scholars published their papers were English. The predominantly local focus in choice of channels probably accounted for a low mean impact factor of 0.049; the journals were also not open access (see Appendix 9). None of the top ten journals of choice of Sierra Leonean authors (mean impact factor=0.333) were either based in Sierra Leone or in a language other than English. Sierra Leonean researchers did not find spaces in Nigerian, or any other African journals (see Appendix 10).

## Co-authorship and Collaboration

Table 8 shows that the collaborative coefficient (CC) of Nigerian biomedical authors was on the increase, as it rose from 0.523 in 2005 to 0.601 in 2008, after which it dropped to 0.599 in 2006. CC increased again from 0.599 to 0.656 between 2009 and 2010 and finally dropped in 2014. Collaboration was highest in 2013 when a CC value of 0.656 was recorded. Collaboration in Ghana was rather unstable during the period, evident in the variations in its

CC values. However, its collaboration reached a peak when it recorded a CC value of 0.702 in 2014. Senegal also had similar variations in collaboration as Ghana having up and down movements in CC values between 2005 and 2012, after which there was increase in 2013 and 2014. It is also observed that the remaining countries had varied CC values through the ten years in view therefore indicating instability in the rate of collaboration in these affected countries.

**Discussion of Findings**

This study was designed to determine the quantity, impact, publication channels and collaborative evidence in biomedical literature in top-producing countries in West Africa during 2005–14. Nigeria, Ghana, Senegal, Burkina Faso and Mali occupied the first five positions in population size and number of publications. A small country, Gambia, eighth in terms of population, emerged sixth in terms of publication production ahead of Côte d'Ivoire, Togo, Sierra Leone and Guinea Bissau. Gambia also emerged as the most productive in terms of normalized production with sixteen out of every 100,000 person publishing biomedical literature while Guinea Bissau came second with ten out of every 100,000 persons publishing, and Senegal came third with six out of every 100,000 persons producing biomedical articles. Uthman (2010) noted in his study that Gambia and Guinea Bissau were the most productive countries when the total products were normalized by number of people with HIV. Uthman and Uthman (2007) also observed that Gambia had the best research performances based on the number of research articles per million inhabitants and research articles per GDP. These observations could be as a result of strong and sound policies, political stability, and the availability of funds for researchers from this country.

Based on the raw data, Nigeria recorded growth in the production of biomedical articles between 2003 and 2011 while Burkina Faso also registered significant growths between 2004 and 2011. Other countries except Ghana had unstable growths in the number of publications they produced. Tijssen (2007) believed that these growths could be as a result of the availability of electronic online submission systems that made it easier for African authors to submit their studies. Over 70 per cent of all the biomedical authors produced an article each while about 29 per cent produced between two and ten articles, and less than 1 per cent of the authors produced above twenty articles. This implies that articles written by one author are more in number than those produced by two or more authors.

**Table 8**: Collaborative Coefficients of Countries

| Year | Nigeria | Ghana | Senegal | Burkina Faso | Mali | Gambia | Togo | Côte d'Ivoire | Guinea Bissau | Sierra Leone |
|---|---|---|---|---|---|---|---|---|---|---|
| 2005 | 0.523 | 0.617 | 0.732 | 0.762 | 0.813 | 0.775 | 0.687 | 0.765 | 0.848 | 0.431 |
| 2006 | 0.535 | 0.543 | 0.800 | 0.766 | 0.689 | 0.769 | 0.758 | 0.661 | 0.721 | 0.644 |
| 2007 | 0.560 | 0.590 | 0.790 | 0.746 | 0.746 | 0.780 | 0.728 | 0.833 | 0.843 | 0.549 |
| 2008 | 0.601 | 0.652 | 0.770 | 0.978 | 0.782 | 0.760 | 0.655 | 0.836 | 0.767 | 0.598 |
| 2009 | 0.599 | 0.660 | 0.798 | 0.776 | 0.815 | 0.751 | 0.705 | 0.788 | 0.804 | 0.726 |
| 2010 | 0.603 | 0.658 | 0.757 | 0.770 | 0.709 | 0.753 | 0.784 | 0.777 | 0.759 | 0.519 |
| 2011 | 0.618 | 0.664 | 0.746 | 0.791 | 0.793 | 0.770 | 0.774 | 0.865 | 0.743 | 0.681 |
| 2012 | 0.627 | 0.636 | 0.796 | 0.825 | 0.851 | 0.813 | 0.782 | 0.743 | 0.847 | 0.734 |
| 2013 | 0.656 | 0.689 | 0.802 | 0.793 | 0.812 | 0.788 | 0.839 | 0.770 | 0.816 | 0.586 |
| 2014 | 0.630 | 0.702 | 0.814 | 0.796 | 0.797 | 0.832 | 0.766 | 0.841 | 0.838 | 0.654 |

Generally, Burkina Faso recorded the highest CC of 0.9796 in 2008 followed by Mali with 0.851 in 2010, and Guinea Bissau with 0.848 in 2005. Sierra Leone, on the other hand, had the lowest CC, 0.431, in 2005.

The scientific productivity of biomedical authors according to Lotka's analyses showed that apart from Côte d'Ivoire that had an α value of less than 2, all other countries had an α value greater than 2 which does not correspond with Lotka's benchmark of α=2. This indicates the authors in these countries are less productive, and it can be said therefore that there is a very low proportion of highly productive biomedical literature in West Africa.

Aside from Senegal's Ndiaye who was the third most productive author with sixteen articles, Nigerian authors occupied the remaining nine positions. The implication of this is that Nigerian authors were the most productive in terms of number of publications produced. This is so because of there are lots of scholars who are in biomedical research, and also, because of the establishment of research institutions owned by both private and government bodies established over recent years to tackle both health and environmental issues encountered in the country.

Hill from Ghana is the most impactful author in West African biomedicine followed by Guinea Bissau's Roth and Togo's Moore. None of Nigeria's authors made the top ten most impactful author rankings. One possible reason could be that most, if not all, of the biomedical articles produced by Nigerian authors were published in local (national) or regional journals which have low or no impact factors. Out of all the valid documents analysed, 9.5 per cent were written by single authors while 90.5 per cent were written by two or more authors. It can therefore be concluded that the trend of collaboration among biomedical authors was very high in these selected countries. The possible explanation for the consistent increase observed in publication output of researchers may be due to the efforts being put into scholarly publication for visibility among peers and career advancement (Ajao and Lawoyin 2005). Another reason could be the need for scientists from different areas of expertise to come together to address problems using different approaches, methods and perspectives.

Sierra Leone, Gambia, and Guinea Bissau, all ranked below the top five in terms of population size and article production, published more in journals with high impact factors. Only Burkina Faso, Senegal and Mali ranked among the top five countries in terms of population and publication distribution featured in the journals with high impact factors. It is obvious that most of the West African countries published in journals located abroad, either in the US or Europe. Nigeria on the other hand is missing out because a very large percentage of its biomedical literatures were published locally i.e. in journals located in Nigeria that have no or low impact factors.

The only journal of West Africa origin, *West African Journal of Medicine*, in the top ten journals in which authors from the sub-region published, ranked tenth. This result points to a recurring observation that most African scholars

prefer or are compelled by either lack of reputable sources at home or institutional policies to publish their findings in journals located in the developed world. This behaviour is further promoted by common notions of the low quality of African local journals as well as the research evaluation methodology which recommends that researchers should publish their research abroad in order to gain visibility.

Despite policies in the university system requiring researchers to publish abroad (Adomi and Mordi 2003), Nigerian researchers appear to prefer journals emanating from their country. Basically, medicine is largely a local discipline, often addressing challenges that exist in the immediate environment. It would appear that these researchers are naturally responding to the needs of the local and immediate community. The relatively larger research infrastructure or large number of universities and research institutes in these countries by comparison with others could translate into greater confidence in their local journals as channels of disseminating research findings. Furthermore, readership audiences in these countries are also considerably large enough to sustain journals. This may not be the same as with smaller countries whose audience might be relatively too small to market research journals.

What could one make out of the fractional mean impact factors of the journals used by the researchers in this study? The big countries namely Nigeria and Ghana which published much of their research in their local journals have very small mean impact factors while smaller countries such as Sierra Leone have a larger mean impact factor. A common stereotype, that fewer English speakers speak French in comparison with French speakers that speak English, played out in this study. More French-speaking countries produced researchers that published in English journals than English researchers that published in French journals.

It is interesting to notice that except Sierra Leone, those countries in the sub-region that have encountered the most conflicts still fall into the top ten countries in terms of paper production. It may be that scholars who were displaced wrote papers from their locations in the names of their local institutions. Basically, the relatively larger population of Nigeria and the sectional nature of the conflicts in areas that produce research papers the least in the country (Nwagwu, in peer review) might provide some explanation. This explanation does not however suffice for the other countries which are small in size but are in the top ten producing countries. It can be inferred therefore that the paper production in the sub-region and in these conflict-afflicted countries would have been much higher in the absence of any conflicts.

## Conclusions, Recommendations and Limitations

Nigerian authors outranked authors from other countries in terms of volume of publications, but none of Nigeria's prolific authors appeared in the list of the most impactful authors. It is also significant that the most impactful authors did not appear in the list of authors that produced the largest volumes of papers. While the most prolific author produced twenty-nine papers (Table 4), the most impactful author produced only seven papers (Table 5). Nigerian authors published mainly in Nigerian local journals; for this reason their impact was lower than authors from other countries who published in journals outside their countries, and outside Africa. Nigeria and Ghana did not appear in the top ten most impactful journals that published papers written by West African authors. It would appear that smaller countries in the sub-region target high impact factor journals while the big ones prefer the other category of journals. This could be explained by the further finding in this study that Nigerian and Ghanaian authors published in Nigerian local journals more than authors from any other country published in their own local journals.

Some recommendations emanate from the results presented in this article. Countries in the sub-region should implement science policies that apply performance appraisal approaches that prioritize quality and collaboration within and outside the country. There should be projects with policies geared towards strengthening local journals sources, strengthening the peer review mechanism of journals and collaboration. Also, with the advantage of huge resources, and differentials in publications evidence, Nigeria should provide leadership in the region by providing collaborative assistance to scholars from other countries. Bibliometric studies are fraught with several limitations particularly in Africa. The source of the data is not comprehensive mainly because there are no local sources that index local publications; also there is the possibility of the search scheme omitting some of the publications in some countries due among other reasons to differences in language.

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**Appendix 1: Top ten journals in Guinea Bissau**

| Rank | Name of journal | No. of publications | SJR | Journal's country of origin |
|---|---|---|---|---|
| 1 | *Vaccine* | 9 | 0.369 | Netherlands |
| 2 | *Pediatric Infectious Disease Journal* | 8 | 0.319 | US |
| 3 | *PLoS One* | 7 | 0.519 | US |
| 4 | *Acta Paediatrica, International Journal of Paediatrics* | 6 | 0.128 | UK |
| 5 | *AIDS* | 6 | 0.709 | US |
| 6 | *International Journal of Epidemiology* | 6 | 0.527 | UK |
| 7 | *Journal of Infectious Diseases* | 6 | 0.831 | US |
| 8 | *Tropical Medicine and International Health* | 6 | 0.241 | UK |
| 9 | *British Medical Journal* | 5 | 0.320 | UK |
| 10 | *Transactions of the Royal Society of Tropical Medicine and Hygiene* | 5 | 0.192 | UK |

**Appendix 2: Top ten journals in Ghana**

| Rank | Name of journal | No. of publications | SJR | Country of origin |
|---|---|---|---|---|
| 1 | *Ghana Medical Journal* | 73 | | Ghana |
| 2 | *Tropical Medicine and International Health* | 51 | 0.241 | UK |
| 3 | *American Journal of Tropical Medicine and Hygiene* | 34 | 0.209 | US |
| 4 | Malaria Journal | 29 | 0.276 | UK |
| 5 | *Transactions of the Royal Society of Tropical Medicine and Hygiene* | 29 | 0.192 | UK |
| 6 | *African Journal of Reproductive Health* | 22 | 0.041 | Nigeria |
| 7 | *West African Journal of Medicine* | 21 | 0.032 | Nigeria |
| 8 | *Environmental Monitoring and Assessment* | 20 | 0.056 | Netherlands |
| 9 | *East African Medical Journal* | 17 | 0.051 | Kenya |
| 10 | *BJOG: An International Journal of Obstetrics and Gynaecology* | 17 | 0.268 | UK |

**Appendix 3: Top ten journals in Senegal**

| Rank | Name of journal | No. of publications | SJR | Journal's country of origin |
|---|---|---|---|---|
| 1 | *Medecine Tropicale* | 82 | 0.041 | Belgium |
| 2 | *Bulletin de la Société de Pathologie Exotique* | 41 | 0.041 | Germany |
| 3 | *Dakar Medical* | 36 | | Senegal |
| 4 | *Malaria Journal* | 26 | 0.276 | UK |
| 5 | *Emerging Infectious Diseases* | 16 | 0.476 | US |
| 6 | *Transactions of the Royal Society of Tropical Medicine and Hygiene* | 15 | 0.192 | UK |
| 7 | *Santé (Montrouge, France)* | 15 | 0.036 | France |
| 8 | *American Journal of Tropical Medicine and Hygiene* | 12 | 0.209 | US |
| 9 | *Tropical Medicine and International Health* | 12 | 0.241 | UK |
| 10 | *Medecine et Maladies Infectieuses* | 11 | 0.065 | Netherlands |

**Appendix 4: Top ten journals in Burkina Faso**

| Rank | Name of journal | No. of publications | SJR | Journal's country of origin |
|---|---|---|---|---|
| 1 | *Tropical Medicine and International Health* | 42 | 0.241 | UK |
| 2 | *Bulletin de la Société de Pathologie Exotique* | 35 | 0.041 | Germany |
| 3 | *Santé (Montrouge, France)* | 31 | 0.036 | France |
| 4 | *Malaria Journal* | 27 | 0.276 | UK |
| 5 | *Medecine Tropicale* | 27 | 0.041 | Belgium |
| 6 | *Pakistan Journal of Biological Sciences* | 19 | 0.042 | Pakistan |
| 7 | *American Journal of Tropical Medicine and Hygiene* | 15 | 0.209 | US |
| 8 | *Social Science and Medicine* | 15 | 0.152 | Netherlands |
| 9 | *Journal of Infectious Diseases* | 11 | 0.831 | US |
| 10 | *Journal of Medical Virology* | 11 | 0.267 | US |

**Appendix 5: Top ten journals in Mali**

| Rank | Name of journal | No. of publications | SJR | Journal's country of origin |
|---|---|---|---|---|
| 1 | *Mali Medical* | 46 | | Mali |
| 2 | *Medecine Tropicale* | 23 | 0.041 | Belgium |
| 3 | *American Journal of Tropical Medicine and Hygiene* | 21 | 0.209 | US |
| 4 | *Malaria Journal* | 19 | 0.276 | UK |
| 5 | *Bulletin de la Société de Pathologie Exotique* | 18 | 0.041 | Germany |
| 6 | *Acta Tropica* | 13 | 0.168 | Netherlands |
| 7 | *PLoS Neglected Tropical Diseases* | 9 | 0.362 | US |
| 8 | *Tropical Medicine and International Health* | 9 | 0.241 | UK |
| 9 | *PLoS One* | 8 | 0.519 | US |
| 10 | *Journal of Ethnopharmacology* | 7 | 0.114 | Netherlands |

**Appendix 6: Top ten journals in Gambia**

| Rank | Name of journal | No. of publications | SJR | Journal's country of origin |
|---|---|---|---|---|
| 1 | *International Journal of Tuberculosis and Lung Disease* | 13 | 0.249 | France |
| 2 | *Tropical Medicine and International Health* | 12 | 0.241 | UK |
| 3 | *PLoS One* | 11 | 0.519 | US |
| 4 | *Malaria Journal* | 10 | 0.276 | UK |
| 5 | *Transactions of the Royal Society of Tropical Medicine and Hygiene* | 8 | 0.192 | UK |
| 6 | *American Journal of Tropical Medicine and Hygiene* | 7 | 0.209 | US |
| 7 | *Bulletin of the World Health Organization* | 6 | 0.428 | Switzerland |
| 8 | *AIDS* | 5 | 0.709 | US |
| 9 | *Euro surveillance: bulletin européen sur les maladies transmissibles (European communicable disease bulletin)* | 5 | 0.375 | France |
| 10 | *Lancet, The* | 5 | 1.486 | UK |

**Appendix 7: Top ten journals in Togo**

| Rank | Name of journal | No. of publications | SJR | Journal's country of origin |
|---|---|---|---|---|
| 1 | *Medecine Tropicale* | 38 | 0.041 | Belgium |
| 2 | *Archives of Pediatrics and Adolescent Medicine* | 17 | 0.275 | US |
| 3 | *Santé (Montrouge, France)* | 11 | 0.036 | France |
| 4 | *Bulletin de la Société de Pathologie Exotique* | 10 | 0.041 | Germany |
| 5 | *Mali Medical* | 6 | | Mali |
| 6 | *Medecine et Maladies Infectieuses* | 6 | 0.065 | Netherlands |
| 7 | *American Journal of Tropical Medicine and Hygiene* | 4 | 0.209 | US |
| 8 | *Archives of Virology* | 3 | 0.162 | Germany |
| 9 | *International Journal of Dermatology* | 3 | 0.097 | UK |
| 10 | Transfusion Clinique et Biologique | 3 | 0.073 | Netherlands |

## Appendix 8: Top ten journals in Côte d'Ivoire

| Rank | Name of journal | No. of publications | SJR | Journal's country of origin |
|---|---|---|---|---|
| 1 | *Medecine Tropicale* | 26 | 0.041 | Belgium |
| 2 | *Bulletin de la Société de Pathologie Exotique* | 11 | 0.041 | Germany |
| 3 | *Archives of Pediatrics and Adolescent Medicine* | 7 | 0.275 | US |
| 4 | *Odontostomatol Tropicale* | 6 | | Senegal |
| 5 | *Parasite* | 6 | 0.133 | France |
| 6 | *Medecine et Maladies Infectieuses* | 5 | 0.065 | Netherlands |
| 7 | *American Journal of Physical Anthropology* | 3 | 0.135 | US |
| 8 | *Clinical Microbiology and Infection* | 3 | 0.32 | UK |
| 9 | *Revue d'Epidémiologie et de Santé Publique* | 3 | 0.078 | France |
| 10 | *Revue de Pneumologie Clinique* | 3 | 0.034 | France |

**Appendix 9: Top ten journals in Nigeria**

| Rank | Name of journal | No. of publications | SJR | Journal's country of origin |
|---|---|---|---|---|
| 1 | *Nigerian Journal of Medicine* | 275 | 0.043 | Nigeria |
| 2 | *Nigerian Journal of Clinical Practice* | 207 | 0.038 | Nigeria |
| 3 | *Nigerian Postgraduate Medical Journal, The* | 192 | 0.036 | Nigeria |
| 4 | *African Journal of Medicine and Medical Sciences* | 182 | 0.034 | Nigeria |
| 5 | *West African Journal of Medicine* | 164 | 0.032 | Nigeria |
| 6 | *Journal of Obstetrics and Gynaecology Canada* | 136 | 0.088 | Canada |
| 7 | *African Journal of Reproductive Health* | 118 | 0.041 | Nigeria |
| 8 | *Annals of African Medicine* | 111 | 0.061 | Nigeria |
| 9 | *Tropical Doctor* | 103 | 0.061 | UK |
| 10 | *African Health Sciences* | 77 | 0.061 | Uganda |

**Appendix 10: Top ten journals in Sierra Leone**

| Rank | Name of journal | No. of publications | SJR | Journal's country of origin |
|---|---|---|---|---|
| 1 | *Lancet, The* | 6 | 1.486 | UK |
| 2 | *Transactions of the Royal Society of Tropical Medicine and Hygiene* | 4 | 0.192 | UK |
| 3 | *World Journal of Surgery* | 4 | 0.196 | Germany |
| 4 | *British Medical Journal* | 3 | 0.32 | UK |
| 5 | *Journal of Infection* | 3 | 0.293 | UK |
| 6 | *Malaria Journal* | 3 | 0.276 | UK |
| 7 | *Tropical Medicine and International Health* | 3 | 0.241 | UK |
| 8 | *American Journal of Tropical Medicine and Hygiene* | 2 | 0.209 | US |
| 9 | *Curationist* | 2 | 0.028 | South Africa |
| 10 | *Disasters* | 2 | 0.061 | UK |

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# A Review of Academic Freedom in Africa through the Prism of the UNESCO 1997 Recommendation

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**Abstract**

An assessment of the level of compliance of the UNESCO *Recommendation* in Europe, Australia, USA and other jurisdictions indicates that the document has been honoured more in its breach than in its observance. Having returned to an ethos of a democratic culture and a refinement of the role of the university in the globalization era, it is time for Africa also to be assessed on the level of compliance with the UNESCO *Recommendation*. This assessment is done based on four indicators identified in the UNESCO *Recommendation*: institutional autonomy, institutional governance, individual rights and freedoms, and tenure. The conclusion reached is that academic freedom has indeed found its way back into African universities after its complete roll-back during the post-independence era. However, the university reforms undertaken in the globalization era in many African universities have undermined greater respect for academic freedom and made hollow the gains made in the respect of freedom in this era.

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**Résumé**

Une évaluation du niveau de conformité avec la Recommandation de l'UNESCO en Europe, en Australie, aux Etats-Unis et d'autres juridictions indique que les dispositions dudit document ont été plus souvent violées que respectées. L'Afrique étant retournée à une culture démocratique et au raffinement du rôle de l'université à l'ère de la mondialisation, il est temps que ce continent évalue le niveau de conformité avec la Recommandation de l'UNESCO. Cette évaluation est réalisée sur la base de quatre indicateurs identifiés dans la Recommandation de l'UNESCO: l'autonomie institutionnelle, la gouvernance institutionnelle, les droits et libertés individuels, et les droits de propriété. La conclusion est que la liberté académique retrouve sa place dans les universités africaines après sa régression totale au cours de la période ayant suivi les indépendances. Cependant, les réformes universitaires menées à l'ère de la mondialisation dans de nombreuses universités africaines ont entamé le respect de la liberté académique et sapé les acquis en matière de respect des libertés au cours de cette période.

## Introduction

The UNESCO[1] General Conference adopted the UNESCO *Recommendation concerning the Status of Higher-Education Teaching Personnel* (hereinafter, UNESCO *Recommendation*) in November 1997, after a thorough process of consultation with academic and legal experts and intergovernmental and international non-governmental organizations, in particular, the International Labour Organization (ILO), a UN agency.[2] The document was then passed without a dissenting vote, with four countries issuing reservations but not in connection with the academic freedom section of the document.[3]

The realization of this goal marks a watershed moment in the evolution, consolidation and standardization of the principles promoting academic freedom in the world. The *Recommendation* places an obligation on Member States and higher education institutions to 'take all feasible steps to apply the provisions spelled out [in the *Recommendation*] to give effect, within their respective territories, to the principles set forth in this *Recommendation*'.[4] This implies an obligation to respect the commitments made in the document, though it is not considered legally binding.

An assessment of the level of compliance of the *Recommendation* in Europe, Australia, USA and other jurisdictions indicates that the document has been honoured more in its breach than in its observance.[5] Having returned to an ethos of a democratic culture and a refinement of the role of the university in the globalization era, it is time for Africa also to be assessed on the level of compliance with the UNESCO *Recommendation*. This assessment is done based on four indicators identified in the UNESCO *Recommendation*: institutional autonomy, institutional governance, individual rights and freedoms, and tenure.

## Definition of Academic Freedom

Academic freedom is a concept that defies an agreed-upon definition.[6] While the *UNESCO Recommendation* shies away from including a definition of academic freedom in the definition section of the document, it makes reference to two definitions of academic freedom in the document. First, paragraph 17 provides for academic freedom for academics by stipulating that '[h]igher-education teaching personnel are entitled to the maintaining of academic freedom, that is to say, the right, without constriction by prescribed doctrine, to' the following five set of freedoms:

- freedom of teaching and discussion
- freedom in carrying out research and disseminating and publishing the results thereof
- freedom to express freely their opinion about the institution or system in which they work
- freedom from institutional censorship
- freedom to participate in professional or representative academic bodies.[7]

The same document also recognizes another form of academic freedom under Article 18 thereof by describing institutional autonomy as 'the institutional form of academic freedom'.[8] These notions of academic freedom are specific to certain duty-holders in the academic freedom equation. We can therefore refer to these notions of academic freedom as narrow or specific as opposed to a broad concept. A broad definition of academic freedom which incorporates these two specific forms of academic freedoms is therefore implied but not provided in the document.

Generally, academic freedom is a facilitator and guarantor for the generation, dissemination, application and protection of knowledge. For the sake of our analysis, we provide a broad definition of academic freedom, as a freedom carved out for academics, higher education institutions and students to enable access and opportunity to conduct scientific enquiry and disseminate the findings thereof – through teaching and publication, and the application of findings to promote human welfare – within the limits of public order, professional ethics and social responsibility and without restraint or the threat of sanctions by government and other power brokers.

## The UNESCO *Recommendation*

The 1997 UNESCO *Recommendation* complements the earlier 1966 *Joint ILO/UNESCO Recommendation concerning the Status of Teachers*.[9] The motivation for developing the 1997 *Recommendation* lay in the pivotal role

that higher education teaching personnel were to play in the realization of the fundamental role of higher education and its contribution to the 'development of humanity and the modern society' and in the need to protect higher education teachers against 'untoward political pressures which could undermine academic freedom'.[10]

The UNESCO *Recommendation* contains eleven chapters on comprehensive issues affecting the rights and responsibilities of the university and academics as well as responsibilities placed on government and other stakeholders to realize the goals of higher education. For the purpose of this work, the four main elements identified as the constituent elements/rights of academic freedom are delineated for detailed analysis.

The first is institutional autonomy (or *specific* academic freedom for institutions), which covers institutional rights, duties and responsibilities.[11] Secondly, are the rights and freedoms of higher-education teaching personnel, which cover individual rights and freedoms (civil rights, academic freedom, publication rights and the international exchange of information), self-governance and collegiality, and duties and responsibilities of higher education teaching personnel.[12] This is broken down into two separate elements: individual rights/freedoms (or *specific* academic freedom for academics) and institutional governance.[13] The fourth element is tenure, which is used to cover terms and conditions of employment, covering entry into the academic profession, security of employment, appraisal, discipline and dismissal, salaries, workload, social security benefits, and health and safety.[14]

Thus, four main elements in the *Recommendation* form the basis for the review of academic freedom in African universities: institutional autonomy, institutional governance, specific academic freedom and tenure. As noted above, the breakdown of academic freedom into these four elements is to ensure better protection of academic freedom.

## The Turn of Africa

The UNESCO *Recommendation* has been used to assess the health of academic freedom in Europe, Australia, the United States and other jurisdictions. It is time it is also applied to the Africa region for a number of good reasons.

In the post-Cold War era, most African states have re-embraced human rights and democracy, which, at least on paper, grant equal opportunities and respect democratic principles. Additionally, unlike the situation beforehand when only a handful of African countries were parties to the two international human rights covenants, the situation is different now. Apart from São Tomé and Príncipe which has signed but not ratified the ICCPR and South Sudan,

which only became independent from Sudan in July 2011, all other African states are now parties to the ICCPR. With respect to the ICESCR, we have Botswana, Mozambique and South Sudan as non-States Parties, with South Africa as a signatory only. The rest are all States Parties to the covenant.

Africa itself has come up with some key human rights instruments of its own, the most prominent being the African Charter on Human and Peoples' Rights, to which all African States are Parties. Though not specifically guaranteed under the African Charter, the African Commission on Human and Peoples' Rights, in a landmark ruling in the case of *Good v. Botswana*, recognized academic freedom under the African Charter.[15]

Furthermore, African states have undertaken significant innovations in their higher education systems including privatization, internationalization, harmonization, massification, adoption of the entrepreneurial university concept with the support of NGOs, foreign universities and so on.[16]

Also, in the face of flagrant violations of academic freedom in the past, African scholars came up with two historical documents to protect and promote academic freedom on the continent, embodied in the *Dar-es-Salaam Declaration on Academic Freedom and Social Responsibility*[17] and the *Kampala Declaration on Intellectual Freedom and Social Responsibility*,[18] both adopted before the UNESCO *Recommendation*.

Additionally, several African countries, such as Morocco, Algeria, Tunisia and other francophone countries have either joined or are planning to join the Bologna Process or have adopted similar Bologna Processes of their own.[19] One may also refer to efforts being made by the Association of African Universities (AAU) and the African Union towards revitalizing higher education on the continent.[20]

Finally, for the first time in the history of the development of African constitutional law, 'academic freedom' has been enshrined in the constitutions of some of these states, either explicitly or directly. Currently, fourteen (25.45 per cent) of the fifty-five African countries[21] make specific reference or give explicit recognition to 'academic freedom' in their constitutions.[22] In most of these constitutions, 'academic freedom' is linked with freedom of expression and incorporated in the chapter on fundamental rights and freedoms. For example, Article 16(1) of the South African Constitution provides that:

> [ex] Everyone has the right to freedom of expression, which includes . . . freedom to receive or impart information or ideas, … freedom of artistic creativity; and … academic freedom and freedom of scientific research. [ends]

Since academic freedom refers to the broad definitional type, it means all other laws enacted to establish or regulate the establishment and functioning of the university should conform to the respect for academic freedom, especially with regard to the four delineated indicators.

Apart from explicit recognition, eight (12.7 per cent) of these countries[23] make direct reference to or recognize academic freedom in their constitutions.[24] Direct recognition of academic freedom includes reference to constituent elements of academic freedom in the constitution. For example, Article 49 of the Constitution of the Republic of Cape Verde stipulates:

> [ext]
> 1. Everyone shall have the freedom to learn, educate and teach.
> 2. Freedom of learning, educating and teaching shall include:
>    (a) The right to attend teaching and educational establishments and to teach without discrimination, as provided by law;
>    (b) The right to choose the type of education and training;
>    (c) The prohibition of the state to programme education and tuition according to any philosophical, aesthetic, political, ideological or religious directives. [ends]

The other thirty-four countries (61.8 per cent), make indirect reference only.[25] In the absence of direct reference to academic freedom or the constituent parts thereof, reference to academic freedom can only be inferred from freedom of expression.

Therefore there is 'a moral and categorical imperative' on African universities and nations to implement the *Recommendation* which therefore triggers the necessity for assessing the level of compliance of the instrument.

**Table 1**: Recognition of academic freedom in the constitutions of African states

| **Explicit Recognition** | **Direct Recognition** | **Indirect Recognition** |
|---|---|---|
| Gambia, Ghana, Kenya, Liberia, Libya, Malawi, Namibia, Sierra Leone, South Sudan, Sudan, South Africa, Tunisia, Uganda, Zimbabwe | Algeria, Burkina Faso, Cape Verde, Central African Republic (CAR), Egypt, Ethiopia, Gabon, São Tomé and Príncipe | Angola, Côte d'Ivoire, Benin, Botswana, Burundi, DRC, Congo, Djibouti, Egypt, Equatorial Guinea, Eritrea, Guinea, Guinea-Bissau, Lesotho, Madagascar, Mali, Mauritania, Mauritius, Mozambique, Niger, Nigeria, Morocco, Rwanda, Senegal, Swaziland Chad, Comoros, Saharawi Arab Democratic Republic (SADR), Somalia, Seychelles, Tanzania, Togo, Zambia |

## Outline

This paper will first examine whether and to what extent African states have implemented the *Recommendation*, applying the four indicators/rights – institutional autonomy, institutional self-governance, individual rights and freedoms, and tenure. This will be followed by an assessment of possible reasons for non-compliance, before considering what could be done to increase the level of compliance.

To assess whether African countries have complied with the UNESCO *Recommendation* data was gathered from the majority of the fifty-five African countries on their constitutions and national legislation on academic freedom, institutional autonomy, institutional governance, and academic tenure. It proved impossible to gather information on all the indicators for seven countries, namely Guinea-Bissau, Saharawi Arab Democratic Republic, São Tomé and Príncipe, Somalia Republic, Sudan, Togo and Tunisia. For an additional four countries, the information gathered was inadequate, meaning having data for fewer than three of the five indicators.[26] Therefore, these countries were also excluded from the survey. The reasons behind the difficulty in accessing information varies from absence of a functioning government to the presence of civil war in some of these countries. The other factor is the absence of established e-governance structures which would have allowed access to the requisite information. Also, there are a sizeable number of universities lacking functioning websites or websites which are updated on a regular basis and contain information on the laws establishing and/or regulating the universities.

The work was limited to public universities for two reasons. First, the private university concept is a recent phenomenon in Africa.[27] They only appeared in the 1980s and therefore were not subject to the same abuses that the public universities endured in the past. Secondly, their numbers far outstrip those of public universities, such that including them would have made the project too big and difficult to control within the limited time frame allotted for the exercise.[28] Moreover, information on the private universities is even more difficult to assess.[29]

## Institutional Autonomy

Institutional autonomy, according to paragraph 17 of the UNESCO *Recommendation*, refers to

> [ext] that degree of self-governance necessary for effective decision making by institutions of higher education regarding their academic work, standards, management and related activities …It is deemed a necessary requirement to enable the 'proper enjoyment of academic

> freedom and compliance with the duties and responsibilities listed' under the Chapter of the *Recommendation* on institutional autonomy.[30]

Under institutional autonomy, we examined whether the institution is set up with, among other elements, financial, administrative, pedagogical, proprietary, and disciplinary autonomy and possesses the right to sue and to be sued in its own capacity.[31] This also involves whether the Head of State[32] of the country doubles as the Chancellor of the University and or whether the appointment of the Vice Chancellor[33] is made or influenced in any way by the Head of State or the governing authority. Where all conditions are met, the country is said to meet the autonomy requirements that will constitute compliance. Where not all of the conditions are met, this will constitute qualified compliance, or non-compliance where none of the conditions are met.

None of the countries surveyed makes specific reference to the protection of institutional autonomy in their constitutions. Respect for institutional autonomy is, therefore, referred from legislative enactments. Of the forty-three countries surveyed,[34] thirteen of them,[35] (representing 30.2 per cent of the total countries surveyed) qualified as meeting full compliance in terms of providing institutional autonomy for their institutions of higher education. For example, in the case of Ghana, public universities are established as a corporate body with perpetual succession, with the right to sue and be sued.[36] The Chancellor is elected by an electoral college made up of an equal number of members from the University Council and the Academic Board.[37] The qualification of a Chancellor is provided for in the Constitution[38] and the President is specifically barred, while he continues in office as President, from holding the office of Chancellor or head of any university in Ghana.[39] Vice Chancellors are also appointed by each university's electoral college.

The majority, twenty countries, representing almost half of the total number of countries which had information on institutional autonomy surveyed (46.5 per cent), met qualified compliance. In most of these cases, the laws setting up such universities will confer on them various form of institutional autonomy. However, this is followed by other prescriptions which take away a good share of this autonomy. For instance, in the case of Botswana, though section 1 of the University Act grants autonomy to the University,[40] the President of the Republic serves as the Chancellor.[41] Also, the Chancellor may, where he considers it to be in the public interest to do so, direct the Minister in writing to assume the exercise of any power or the performance of any duty conferred or imposed on the University Council or on the Vice-Chancellor by the University Act or by statutes enacted by the University Council.[42] In addition, the Vice-Chancellor is appointed by the President upon consultation with the

University Council and conditions as may be determined by the President. Thus, it is observed that in the case of qualified compliance, a claw-back clause is in effect.[43]

The survey revealed ten countries (representing 23.3 per cent of the total) where there is non-compliance.[44] In the case of DRC, for example, the laws reveal that the Rector is appointed by the President of the Republic on the proposal of the Commissioner of State for Higher Education and Scientific Research. This rule notwithstanding, the President may appoint any person s/he deems worthy and competent as Rector.[45] The President is also vested with power to appoint people to other key positions of the university.[46] The Rector appoints deans and vice deans and heads of departments[47] and ministerial regulations are issued to determine programmes, the duration and conditions for admissions.

**Individual Rights and Freedoms**

Under this indicator, the individual rights and freedoms of the academic (or *specific* academic freedom in relation to teaching and research) are referred to. Paragraph 27 of the UNESCO *Recommendation* provides that

> [ext] Higher-education teaching personnel are entitled to the maintaining of academic freedom, that is to say, the right, without constriction by prescribed doctrine, to freedom of teaching and discussion, freedom in carrying out research and disseminating and publishing the results thereof, freedom to express freely their opinion about the institution or system in which they work, freedom from institutional censorship and freedom to participate in professional or representative academic bodies. [ends]

The indicators for determining compliance here are the elements that the UNESCO *Recommendation* assigns to academic freedom for academics – teaching, research, freedom of expression about the institution, freedom from censorship and freedom of association. This is in addition to those 'internationally recognized civil, political, social and cultural rights applicable to all citizens'.[48] Academic freedom in this respect is with reference to one of the specific forms which come together to constitute *broad* or *general* academic freedom. This kind of freedom is located in the legislation of the countries, not their constitutions. The level of compliance was determined by examining the legislative enactments of the various countries, and the university statutes of some of their public universities to determine the extent to which these rights and freedoms are incorporated in those laws.

**Table 2**: Level of compliance of institutional autonomy

| **Compliance 30.2%** | **Qualified compliance 46.5%** | **Non-compliance 23.3%** | **Data not available** |
|---|---|---|---|
| Burkina Faso, Cape Verde, Comoros, Egypt, Equatorial Guinea, Ghana, Kenya, Mauritius, Morocco, Namibia, Seychelles, South Africa, Swaziland | Algeria, Angola, Benin, Congo, Côte d'Ivoire, Djibouti, Ethiopia, Gabon, Libya, Madagascar, Malawi, Mauritania, Nigeria, Rwanda, Senegal, Sierra Leone, Tanzania, Tunisia, Uganda, Zimbabwe | Botswana, Burundi, Cameroon, DRC, CAR, Eritrea, Gambia, Lesotho, Mozambique, Zambia | Chad, Guinea Bissau, Guinea, Liberia, Mali, Niger, SADR, São Tomé and Príncipe, Somalia, South Sudan, Sudan, Togo |

In total, complete information for this measure was found for thirty-four out of the fifty-five countries (61 per cent). That is, for twenty-one of the fifty-five African countries, representing 39 per cent, no data was available for assessment. Of the thirty-four countries surveyed, twenty-one of them, constituting 61.7 per cent of the total number met the compliance test;[49] one country, constituting 3 per cent, met qualified compliance; and, twelve countries (35.2 per cent) were non-compliant. An example of a compliant state is Kenya whose University Act, 2012 (No. 42), section 29 (1) and (2) thereof provides that:

> [ext]
> (1) A University, in performing its functions shall—
> (a) have the right and responsibility to preserve and promote the traditional principles of academic freedom in the conduct of its internal and external affairs;
> …
> (2) A member of the academic staff of a university shall have the freedom, within the law, in the member's teaching, research and any other activities either in or outside the university, to question and test received wisdom, to put forward new ideas and to state opinions, and shall not be disadvantaged, or subject to less favourable treatment by the university, for the exercise of that freedom. [ends]

A non-compliant state was determined mainly by the fact that though the information was available, no reference to recognition of individual academic freedom for academics was found. However, in the case of Eritrea, there was a specific indication of non-recognition of academic freedom for individual academics where it was stated in a document thus:

> [ext] Lecturers who attend conferences are required to fill a form, which includes comments of the head of the institution, after returning from leave. This form is submitted to the office of the Executive Director of NBHE for onward submission to the President's Office.[50] [ends]

**Table 3**: Level of compliance of individual rights and freedoms

| **Compliant**<br>**61.7%** | **Qualified compliant**<br>**3.0%** | **Non-compliant**<br>**35.3%** | **DNA**<br>**39%** |
|---|---|---|---|
| Algeria, Angola, Benin, Burkina Faso, Burundi, Cameroon, Cape Verde, CAR, Equatorial Guinea, Ethiopia, Ghana, Kenya, Madagascar, Mauritania, Mozambique, Rwanda, Senegal, Seychelles, Sierra Leone, South Africa, Uganda | Morocco | Botswana, Côte d'Ivoire, Djibouti, Eritrea, Lesotho, Malawi, Namibia, Nigeria, Swaziland, Tanzania, Zambia, Zimbabwe | Chad, Comoros, Congo, DRC, Egypt, Gabon, Gambia, Guinea, Guinea-Bissau, Liberia, Libya, Mali, Mauritius, Niger, SADR, São Tomé and Príncipe, Somalia, South Sudan, Sudan, Togo, Tunisia |

**Institutional Self-governance**

The third indicator is self-governance and collegiality. Paragraph 31 of the UNESCO *Recommendation* provides that

> [ext] Higher-education teaching personnel should have the right and opportunity, without discrimination of any kind, according to their abilities, to take part in the governing bodies and to criticize the functioning of higher education institutions, including their own, while respecting the right of other sections of the academic community to participate, and they should also have the right to elect a majority of representatives to academic bodies within the higher education institution.[51] [ends]

In Paragraph 31 the *Recommendation* thus talks about two bodies, the governing council and academic board or senate. The former is generally equated to the University (administrative) Council and the latter to the Senate or Academic Board. The University Council is equivalent to the executive body of a university's governance system. It is usually responsible for the financial matters and strategic direction of the university and for implementing the academic decisions of the academic board, including appointments. The Senate is responsible for determining the academic direction of the university.

Paragraph 31 calls for the inclusion of academic staff in the Council; and in the case of the Senate, that their representation should be in the majority. This element deals with democracy within the university system, in order to ensure accountability and enable the flourishing of academic freedom. Hence this measure includes the internal processes and protocols which will ensure the effective exercise and enjoyment of the relevant civil and political rights, such as the right to criticize and the right of participation, as well as the inclusion of the broad issues over which academics could exercise critical review and be involved in discussions. Also critical to determining the democratic structure of these bodies is representation of the national government in any of these bodies and the extent to which its presence defers undue authority to it, and therefore may derail the ability of the university to use these structures to ensure and promote institutional autonomy. These factors are used to determine whether African countries respect the right of internal self-governance.

The survey in this area therefore focused on the two bodies: the University Council, being equivalent to the executive, and the Senate, the legislature. Of course, the Council is also reserved some legislative powers, or at least the power to propose issues for the Senate to review and deliberate upon for ultimate endorsement by the former.

In the case of University Councils, whether control and representation are subject to the whims and caprices of the ruling government is assessed, as well as what decisions the Councils, as compared to government, can make for the university. It is also about the balance of representation of the university hierarchy, the academic staff association, government and the community.

The following information was found on the University Councils. Of the fifty-five countries, available information was collected on thirty-five countries, representing 63.6 per cent of countries. Therefore no or insufficient information was found for twenty countries (36.4 per cent). Of the thirty-five countries, sixteen recorded compliance (61.7 per cent), six (17.1 per cent), qualified compliance, and thirteen, non-compliance (37.2 per cent).

Information on the Senate was found for thirty-six countries or 61.8 per cent of African countries. Of this number, the survey revealed 77.7 per cent compliance (twenty-eight countries); 22.3 per cent non-compliance (eight countries) and zero qualified compliance. Two out of the remaining thirty-six countries surveyed had information on one of the institutions only; thirteen of them met full compliance for both bodies; thirteen met compliance for one body against qualified compliance or non-compliance for the other body; and two met non-compliance for both bodies.

An example of a country that meets full compliance for both is South Africa:

> [ext] At least 60 per cent of the members of a council must be persons who are not employed by, or students of, the public higher education institution concerned.[52]
>
> The chairperson, vice-chairperson and other office-bearers for a University Council should be from among its members in the manner determined by the institutional statute.[53]
>
> The majority of members of a senate must be academic employees of the public higher education institution concerned.[54] [ends]

A case of non-compliance is typified by Djibouti where members of the Administration Board (the University Council) are appointed by decree for a period of three years; and the majority of such appointees are representatives of the public service.[55] Rwanda's Senate, whose organization, functioning and responsibilities are determined by a Prime Minister's Order epitomizes a case of non-compliance.[56] Another example of non-compliance is Ethiopia. Here, apart from the difficulty associated with the fact that membership and the number of members of the Senate and their terms of office is determined by the establishing law of the public institution, the appointment, limited to 'meritorious and senior members of the academic staff', is reserved for the President of the IHE.[57]

**Table 4a**: Level of compliance with institutional self-governance (University Councils)

| **Compliant 45.7%** | **Qualified compliant 17.1%** | **Non-compliant 37.2%** | **Data not available 36.4%** |
|---|---|---|---|
| Angola, Cape Verde, Comoros, Ghana, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Niger, Nigeria, Seychelles, Sierra Leone, South Africa, Uganda | Cameroon, Ethiopia, Mauritania, Morocco, Rwanda | Algeria, Benin, Botswana, CAR, Côte d'Ivoire, Djibouti, Equatorial Guinea, Eritrea, Kenya, Mali, Swaziland, Tanzania, Zimbabwe | Burkina Fsaso, Burundi, Chad, Congo, DRC, Egypt, Gabon, Gambia, Guinea, Guinea-Bissau, Liberia, Libya, SADR, São Tomé et Príncipe, Senegal, Somalia, South Sudan, Sudan, Togo, Tunisia |

**Table 4b**: Level of compliance with institutional self-governance (Senate)

| **Compliant**<br>**77.7%** | **Qualified compliant**<br>**0%** | **Non-compliant**<br>**22.3%** | **Data not available**<br>**35%** |
|---|---|---|---|
| Algeria, Angola, Benin, Botswana, Cape Verde, Côte d'Ivoire, Djibouti, Equatorial Guinea, Ghana, Kenya, Lesotho, Madagascar, Malawi, Mali, Mauritius, Morocco, Mozambique, Namibia, Niger, Nigeria, Seychelles, Sierra Leone, South Africa, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe | | Burkina Faso, CAR, Cameroon, Comoros, Eritrea, Ethiopia, Mauritania, Rwanda | Burundi, Chad, Congo, DRC, Egypt, Gabon, Gambia, Guinea, Guinea-Bissau, Liberia, Libya, SADR, São Tomé et Príncipe, Senegal, Somalia, South Sudan, Sudan, Togo, Tunisia |

**Tenure**

The last indicator for discussion is tenure. According to the UNESCO *Recommendation*, tenure refers to

> [ext] [S]ecurity of employment in the profession … [and] … it ensures that higher-education teaching personnel who secure continuing employment following rigorous evaluation can only be dismissed on professional grounds and in accordance with due process… It should be as far as possible even when changes in the organization of or within a higher education institution or system are made, and should be granted, after a reasonable period of probation, to those who meet stated objective criteria in teaching, and/or scholarship, and/or research to the satisfaction of an academic body, and/or extension work to the satisfaction of the institution of higher education. [ends]

Tenure relates to the right to work, which is guaranteed under ILO Conventions and the ICESCR, among others.[58] In fact, tenure is one of the key issues determining the ILO's interest and involvement in the drafting of the *Recommendation*. In different African states, there have been several instances of abuse of this right by governments and university management against academics as a means to silence them. In recent times, violation of the right to tenure takes more subtle forms such as bullying, 'marriage and baby penalties' imposed on women,[59] reassignment to a new faculty or department or new teaching areas.

With respect to tenure, data was gathered on the following aspects, among others: whether there is protection against arbitrary dismissal; procedures set up to be followed before dismissal or disciplinary sanctions are applied; whether recourse to appeal to a higher body or to a regular court is possible; and on rights to form a union, strike and engage in collective bargaining.

It is important to note that in most African countries, due to the continued dominant role of governments in financing education, lecturers are recognized as part of the civil service. Perhaps for this reason, a significant number of African universities do not have protection of tenure in the laws establishing or regulating universities. For this reason, the survey relies on the constitutional provisions on the right to work or the country's labour laws to determine whether tenure is protected for university academic staff.

Information was not available on eight out of the fifty-five countries (15 per cent). Therefore assessment was done on forty-seven countries (85 per cent). Of this number, forty-three countries (91.5 per cent) met the compliance standard based on the review of their constitutions protecting the right to work, the laws in the university statutes or labour codes. There was one

case of qualified compliance (constituting 2.1 per cent) and three cases (6.4 per cent) of non-compliance.

An example of compliance can be illustrated from Ghana, where it is stated that

> [ext]
> (1) The appointment or promotion of academics shall be based purely on merit in accordance with principles of fairness and non-discrimination and in accordance with the provisions of the Act and these Statutes.
> (2) In considering an application for an appointment or promotion of a senior member, the appointing authority shall be bound by the criteria set out in Schedule F to these Statutes. [ends]

There is also an Appeals Board whose function is to 'hear and determine on appeal matters on breach of employment contracts by the University; and, the promotion of persons duly employed by the University'.[60] Further, the University recognizes the right of every employee to freedom of association and of the right to demonstrate in order to protect his or her economic and social interests.[61]

Benin is an example of qualified compliance, with respect to this measure. Under its laws, right to work is guaranteed.[62] Also, dismissal is supposed to conform to Article 131 of the *Statut Général des Agents Permanents de l'Etat*. In other instances, lecturers may be disciplined by the disciplinary council of the universities of Benin which is set up by a ministerial decree.[63] However, lecturers are bonded to serve at least a term of ten years before they can quit their jobs or risk being asked to refund the money the government has expended towards their training.[64]

The case of Mauritania is an example of non-compliance. Here, the Board of Directors of the University creates within it a disciplinary board and, if necessary, ad hoc committees.[65] Some sanctions are imposed by decision of the Minister of Higher Education based on a report of the Chairman of the Board of Directors of the establishment after notice of the disciplinary committee concerned.[66] Other sanctions are made by joint order of the Ministers in charge of Higher Education and Public Service, based on a decision of the Chairman of the Board arrived at from the report of the Disciplinary Committee of the Scientific and Pedagogical Council. The exercise of disciplinary action against the President of a university is reserved for the Minister of Higher Education.[67]

**Table 5:** Level of compliance with tenure

| **Compliant 91.5%** | **Qualified compliant 2.1%** | **Non-compliant 6.4%** | **Data not available 15%** |
|---|---|---|---|
| Algeria, Angola, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, CAR, Chad, Congo, Djibouti, Egypt, Equatorial Guinea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Côte d'Ivoire, Kenya, Liberia, Libya, Malawi, Mali, Mauritius, Morocco, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Seychelles, Sierra Leone, Swaziland, South Africa, Tanzania, Tunisia, Uganda, Zambia, Zimbabwe | Benin | Lesotho, Madagascar, Mauritania | Eritrea, Guinea- Bissau, SADR, São Tomé et Príncipe, Somalia, South Sudan, Sudan, Togo |

**Table 6**: Comprehensive country analysisof the UNESCO Recommendation, 1997

| | **Institutional autonomy** | **Individual rights and freedoms in legislation** | **Democratic structure of University Council/ Composition of academic staff on Senate** | **Academic tenure** | **Constitutional reference to academic freedom** |
|---|---|---|---|---|---|
| Algeria | Qualified Compliance | Compliance | Non-compliance/ Compliance | Compliance | Direct |
| Angola | Qualified Compliance | Compliance | Compliance/Compliance | Compliance | Explicit |
| Benin | Qualified Compliance | Compliance | Non-compliance/ Compliance | Qualified Compliance | Explicit |
| Botswana | Non-compliance | Non-compliance | Non-compliance/ Compliance | Compliance | Explicit |
| Burkina Faso | Compliance | Compliance | NA/Non-compliance | Compliance | Explicit |
| Burundi | Non-compliance | Compliance | NA | Compliance | Indirect |
| Cameroon | Non-compliance | Compliance | Qualified Compliance/ Non-compliance | Compliance | Explicit |
| Cape Verde | Compliance | Compliance | Compliance/Compliance | Compliance | Indirect |
| Central African Republic | Non-compliance | Compliance | Non-compliance/Non-compliance | Compliance | Indirect |
| Chad | NA | Non-compliance | NA/NA | Compliance | Indirect |

| | | | | | |
|---|---|---|---|---|---|
| Comoros | Compliance | Non-compliance | Compliance/Non-compliance | Compliance | Explicit |
| Congo | Qualified Compliance | Non-compliance | NA | Compliance | Indirect |
| DRC | Non-compliance | Non-compliance | Compliance/ NA | Compliance | Direct |
| Côte d'Ivoire | Qualified Compliance | Non- compliance | Non-compliance/ Compliance | Compliance | Direct |
| Djibouti | Qualified Compliance | Non-compliance | Non-compliance/ Compliance | Compliance | Direct |
| Egypt | Compliance | Compliance | NA/NA | Qualified Compliance | Direct |
| Equatorial Guinea | NA | Non-compliance | NA | Compliance | Direct |
| Eritrea | Non-compliance | Non-compliance | Non-compliance/Non-compliance | NA | Explicit |
| Ethiopia | Qualified Compliance | Compliance | Qualified Compliance/ Qualified Compliance | Compliance | Indirect |
| Gabon | Qualified Compliance | Non-compliance | NA | Compliance | Indirect |
| Gambia | Non-compliance | Non-compliance | NA | Compliance | Explicit |
| Ghana | Compliance | Compliance | Compliance/Compliance | Compliance | Indirect |
| Guinea | NA | Non-compliance | NA | Compliance | Explicit |
| Guinea-Bissau | NA | Qualified Compliance | NA | NA | Indirect |

| | | | | | |
|---|---|---|---|---|---|
| Kenya | Compliance | Compliance | Non-compliance/ Compliance | Compliance | Indirect |
| Lesotho | Non-compliance | Non-compliance | Compliance/Compliance | Compliance | Indirect |
| Liberia | NA | Compliance | NA | Compliance | Indirect |
| Libya | Qualified Compliance | Qualified Compliance | NA | Compliance | Indirect |
| Madagascar | Qualified Compliance | Compliance | Compliance/Compliance | Non-compliance | Explicit |
| Malawi | Qualified Compliance | Compliance | Compliance/Compliance | Compliance | Indirect |
| Mali | NA | Qualified Compliance | NA/Compliance | Compliance | Indirect |
| Mauritania | Qualified Compliance | Qualified Compliance | Qualified Compliance/Non-compliance | Non-compliance | Indirect |
| Mauritius | Compliance | Non-Compliance | Compliance/Compliance | Compliance | Indirect |
| Morocco | Compliance | Qualified Compliance | Qualified Compliance/ Compliance | Compliance | Indirect |
| Mozambique | Non-compliance | Non-compliance | Compliance/Compliance | Compliance | Indirect |
| Namibia | Compliance | Compliance | Compliance/Compliance | Compliance | Indirect |
| Niger | NA | Non-compliance | Compliance/Compliance | Compliance | Indirect |
| Nigeria | Qualified Compliance | Non-compliance | Compliance/Compliance | Compliance | Indirect |
| Rwanda | Qualified Compliance | Compliance | Qualified Compliance/Non-compliance | Compliance | Indirect |

| | | | | | |
|---|---|---|---|---|---|
| SADR | NA | NA | NA | NA | Indirect |
| São Tomé et Príncipe | NA | NA | NA | NA | Direct |
| Senegal | Qualified Compliance | Compliance | NA | Compliance | Indirect |
| Seychelles | Compliance | Compliance | Compliance/Compliance | Compliance | Explicit |
| Sierra Leone | Qualified Compliance | Compliance | Compliance/Compliance | Compliance | Indirect |
| Somalia | NA | NA | NA | NA | Indirect |
| South Africa | Compliance | Compliance | Compliance/Compliance | Compliance | Indirect |
| South Sudan | NA | Compliance | NA | NA | Indirect |
| Sudan | NA | Compliance | NA | NA | Explicit |
| Swaziland | Compliance | Non-compliance | Non-compliance/ Compliance | NA | Indirect |
| Tanzania | Qualified Compliance | Non-compliance | Non-compliance/ Compliance | Compliance | Indirect |
| Togo | NA | Non-compliance | NA | NA | Direct |
| Tunisia | Qualified Compliance | Compliance | NA | Compliance | Indirect |
| Uganda | Qualified Compliance | Compliance | Compliance/Qualified Compliance | Compliance | Explicit |
| Zambia | Non-compliance | Non-compliance | Non-compliance/ Compliance | Compliance | Explicit |
| Zimbabwe | Qualified Compliance | Compliance | Non-compliance/ Compliance | Compliance | Indirect |

Due to the extremely difficult circumstances encountered in gathering data for this project, where information was gathered on less than three of the five indicators for a country, the data was considered not adequate to merit an assessment. Using this yardstick, information (covering three to five of the indicators) was found for forty-four countries, representing 80 per cent of the total number of African countries.

The tally is broken down into the categories of 'free' (for the countries that garnered between 75 to 100 per cent), 'partly free' (50 to 74 per cent) and 'not free' (0 to 49 per cent). The survey found nine countries (20.5 per cent) to be 'free'. The largest conglomerate was found in the 'partly free' category, twenty countries, making up 45.5 per cent of the total. This is followed by the 'not free' category which is made up of fifteen countries equivalent to 34 per cent.

**Table 7**: Academic freedom rankings

| **Score %** | **Country** | **Academic freedom ranking** |
|---|---|---|
| 100 | Cape Verde | Free (75-100%) |
| 100 | Ghana | |
| 100 | South Africa | |
| 90 | Kenya | |
| 85 | Uganda | |
| 80 | Equatorial Guinea | |
| 80 | Namibia | |
| 80 | Seychelles | |
| 75 | Rwanda | |
| 70 | Angola | Partly Free (50-74%) |
| 70 | Sierra Leone | |
| 65 | Morocco | |
| 60 | Algeria | |
| 60 | Burkina Faso | |
| 60 | CAR | |
| 60 | Egypt | |
| 60 | Ethiopia | |
| 60 | Malawi | |
| 60 | Mauritius | |
| 60 | Mozambique | |
| 60 | Tunisia | |
| 50 | Comoros | |
| 50 | Libya | |
| 50 | Madagascar | |

| | | |
|---|---|---|
| 50 | Nigeria | |
| 50 | Senegal | |
| 50 | Swaziland | |
| 50 | Tanzania | |
| 50 | Zimbabwe | |
| 45 | Cameroon | Not free (0-49%) |
| 45 | Mauritania | |
| 40 | Benin | |
| 40 | Burundi | |
| 40 | Côte d'Ivoire | |
| 40 | Djibouti | |
| 40 | Lesotho | |
| 40 | Niger | |
| 30 | Botswana | |
| 30 | Congo | |
| 30 | DRC | |
| 30 | Gabon | |
| 25 | Zambia | |
| 20 | Gambia | |
| 0 | Eritrea | |
| NA | Chad | NA |
| NA | Guinea | |
| NA | Guinea-Bissau | |
| NA | Liberia | |
| NA | Mali | |
| NA | SADR | |
| NA | São Tomé et Príncipe | |
| NA | Somalia | |
| NA | South Sudan | |
| NA | Sudan | |
| NA | Togo | |

## Conclusion and Recommendations

This study has sought to analyse the health of academic freedom in African universities based on the existing laws of the African countries concerned. The yardstick is the UNESCO *Recommendation's* four principal indicators on academic freedom: institutional autonomy, self-governance, individual rights and freedoms, and tenure. The results show that while Africa has come a long way in restructuring its laws to accommodate academic freedom, most countries are lagging behind.

To enable these countries improve on their laws and grant greater respect for academic freedom, external entities such as the Joint Committee of Experts on the Application of the Recommendations Concerning Teaching Personnel (CEART)[68] and the African Commission on Human and Peoples' Rights will need to scale up their activities.

For CEART, it is evident that the current schedule of a meeting every three years is woefully inadequate. Moreover, to be effective, CEART needs to engage directly in more effective promotional activities and engagement with all relevant stakeholders. Perhaps CEART can do a better job by creating two separate committees to monitor compliance of the 1966 document (the *Joint ILO/UNESCO Recommendation concerning the Status of Teachers*) (for teachers in primary and secondary schools) and the 1997 *Recommendation* (for academics in higher education institutions). Further, activities of the two committees should have regional sub-committees to take into account the cultural, political and developmental peculiarities which affect each particular region and to address them, drawing on each such region's existing region-specific instruments of academic freedom, such as the *Kampala Declaration* in the case of East Africa, in seeking to promote academic freedom in each locality. Additionally, it is proposed that the CEART sub-committees be given additional resources to enable them meet twice a year, in the same way as it works with treaty-based human rights bodies, with the powers to also schedule special sessions to deal with emergency situations.[69]

CEART should also set up the special rapporteur system, on a thematic basis, to cover the four pillars of academic freedom – institutional autonomy, self-governance, individual rights and freedoms, and tenure. The mandate should include gathering information on violations of academic freedom, making recommendations on how to better promote and protect academic freedom as well as to transmit urgent appeals on alleged violations of academic freedom and undertaking fact-finding visits. Another function the CEART should take upon itself is the task of delivering general comments in order to provide comprehensive interpretation of substantive provisions of the two *Recommendations*.

The African Commission on Human and Peoples' Rights also has a role to play to ensure that academic freedom finds its rightful place among the list of human rights provisions in the African Charter on Human and Peoples' Rights. The Commission's *Principles and Guidelines on the Implementation of the Economic, Social and Cultural Rights Guaranteed in the African Charter on Human and Peoples' Rights* provides room for the recognition of academic freedom[70] but not in the *Declaration of Principles on Freedom of Expression in Africa*.[71] This was in spite of the fact that at the time the Declaration came

into existence in 2002, a number of African states had broken away from the past and began to give explicit recognition of academic freedom in their constitutions. Probably on the basis of that narrow approach to the elucidation and expansion in the application of academic freedom, the Special Rapporteur on Freedom of Expression and Access to Information[72] has shied away from making public interventions where violations of academic freedom have taken place in countries such as Malawi,[73] Sudan and Egypt even where they fall directly in the realm of freedom of expression.[74] It is therefore suggested that the African Commission reformulate the Declaration of Principles on Freedom of Expression in Africa to cover academic freedom and extend the mandate of the Special Rapporteur to specifically cover academic freedom issues,[75] as it did in the case of *Good v. Botswana*.[76]

Also, it would appear that the previous impetus towards protecting academic freedom provided by the *Kampala* and *Dar-es-Salaam Declarations* has dissipated. Moreover, the historical circumstances which gave birth to the two *Declarations* have changed dramatically. In 1990, the transition to democracy had just been triggered and most African states were still in the throes of dictatorship; the UNESCO *Recommendation* was seven years away from birth. For this reason, it is perhaps now time for academics across Africa to start to consider drafting an African version of a *Magna Charta Libertatis Academicae*[77] (similar to the AAUP Statement on academic freedom, described as constituting a professional 'common' or customary law of academic freedom and tenure).[78] In the current socio-economic and political climates of many African states, such a task will prove to be daunting. However, the costs of failing to protect this basic human right, as the remainder of nations across the globe use universities to create new ideas and intellectual properties essential for the growth of the knowledge economy, will be great to both African universities and nation states alike.

Furthermore, this study reveals that the general absence of formal legal constraints on the abuse of academic freedom means that departmental customs, standards and mores, which have frequently been developed in response to the dearth of legal protection, may be of crucial significance within the day-to-day running of university departments, as they undertake their duties of teaching and research, often despite unwelcome and unnecessary pressures from national governments. In consequence, future studies are now needed for a more detailed analysis of academic freedom which takes into consideration the continent's history and culture, and the level of development of university education. It is equally important to move away from a *de jure* protection of academic freedom to a *de facto* one, which is underpinned by a university's internal cultural norms and attitudes that shape the relationship between faculty and management.

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## Notes

1. UNESCO is the intergovernmental organization with responsibility for setting standards or norms within education.
2. As the *Recommendation* concerned employment conditions, there was also consultation with the ILO.
3. ILO, 'UNESCO Recommendation concerning the Status of Higher-Education Teaching Personnel, 1997. Text adopted by the 29th Session of the General Conference of UNESCO' (GB.271/LILS/9, 271st Session, Geneva, March 1998).
4. UNESCO,1997, 'Recommendation concerning the Status of Higher-Education Teaching Personnel', in *Records of the General Conference*, Twenty-ninth Session, 21 October to 12 November 1997, Volume 1 Resolutions, Paris: UNESCO, Paragraph 74, p. 34.
5. See for example: Karran, T.,2007, 'Academic freedom in Europe: a preliminary comparative analysis', *Higher Education Policy* 20 (3): 289–313.
6. See for example Gerber, Larry G., 2001, '"Inextricably linked": shared governance and academic freedom', *Academe* 87 (3): 22–24. Also, Latif, M.A., 2014, 'Academic freedom: problems in conceptualization and research', *Higher Education Research and Development* 33 (2): 399–401.
7. *UNESCO Recommendation*, Paragraph 27.
8. UNESCO *Recommendation*, Paragraph 18.
9. Adopted on 5 October 1966 at a conference held in Paris at the UNESCO headquarters and organized in close cooperation with the ILO.
10. Page, J., 2007, 'Australian universities and international standards: Australian compliance with the 1997 UNESCO Recommendation Concerning the Status of Higher Education Teaching Personnel', *Journal of Higher Education Policy and Management* 29 (1): 95–101.
11. UNESCO *Recommendation*, Paragraph 17.
12. Democratic representation of academic unions in decision-making bodies of the institutions of higher education. UNESCO *Recommendation*, Paragraphs 31, 32.
13. UNESCO *Recommendation*, Paragraphs 25–30.

14. Paragraph 46 of the UNESCO *Recommendation* states this as 'Security of employment in the profession, including tenure or its functional equivalent'. There are also special rights for disabled persons, women and part-time teaching personnel.
15. *Kenneth Good v. Republic of Botswana* Communication 313/05 26 May 2010.
16. Lebeau, Y., and Mills, D., 2008, 'From "crisis" to "transformation"? Shifting orthodoxies of African higher education policy and research', *Learning and Teaching* 1 (1): 58–88; Lulat, Y.G.-M., 2003, 'The Development of Higher Education in Africa', in Teferra, D. and Altbach, P.G., eds, *African Higher Education: An International Reference Handbook,* Bloomington: Indiana University Press; and, G. Mohamedbhai, 2008, *The Effects of Massification on Higher Education in Africa,* Accra: Association for the Development of Education in Africa and Association of African Universities.
17. Adopted by delegates from six academic staff associations at the end of the Inaugural Workshop held in April 1990.
18. Adopted in Kampala in 1990.
19. 'The Bologna Process in Africa: a case of aspiration, inspiration, or both?', 25 May 2008. Available at http://globalhighered.wordpress.com/2008/05/25/the-bologna-process-a-case-of-aspiration-and-inspiration-in-africa/
20. Revitalising Higher Education in Africa. Report of First Experts' Meeting, held 27–28 October 2005, Johannesburg. Available at http://www.aau.org/au_experts/docs/midrand_rep.pdf
21. Ghana, South Africa, Uganda, Kenya, Malawi, Sierra Leone, Liberia, Tunisia, Libya, Sudan, South Sudan, Namibia, the Gambia and Zimbabwe.
22. Explicit recognition means specific use of the term 'academic freedom' in addition to other rights essential to the full exercise of academic freedom.
23. Algeria, Burkina Faso, Central African Republic, Cape Verde, São Tomé and Príncipe, Gabon and Ethiopia.
24. Direct recognition of academic freedom by including constituent elements of academic freedom, such as 'scientific research' or 'artistic creativity'.
25. Indirect recognition.
26. The fifth indicator is the reference to academic freedom in the constitutions of African countries.
27. Megan Lindow, 2011, *Weaving Success: Voices of Change in African Higher Education*, New York: Institute of International Education.
28. Kudzai Mashininga, 'Private universities set to overtake public institutions', in University World News 4 March 2012, Issue No. 211. Available at http://www.universityworldnews.com/article.php?story=20120302141207184
29. N.V. Varghese, ed., 2006, *Growth and Expansion of Private Higher Education in Africa*, Paris: UNESCO 2006.
30. UNESCO *Recommendation*, Paragraph 17.

31. In this regard, one can refer to the statutes of the Universidad Augustinho Neto of Angola which has a comprehensive set of statements on autonomy, covering statutory, scientific, pedagogical, administrative, proprietary, financial and disciplinary autonomy: Article 8(1) Estatutuo Organico da Universidad Agostinho Neto, Decreto Presidencial 229/11, 19 August 2011. For a critical review of the subject in the context of Nigeria, see A.K. Okorosaye-Orubite et al., 2012, 'University autonomy, academic freedom and Academic Staff Union of Universities' (ASUU) struggles in Nigeria: a historical perspective' *Asian Social Science* 8: (12): 265.
32. Or Government or a Minister of State.
33. Or Rector or President is not influenced in any way.
34. Information on this indicator could not be found for the following countries: Chad, Liberia, Guinea, Guinea-Bissau, Niger, Mali, Togo, São Tomé and Príncipe, SADR, Somalia, Sudan and South Sudan.
35. See Table 2 *infra*.
36. Section 1 of the University of Ghana Act, 2010.
37. See, for example, section 6(1) and (2) of the University of Ghana Act, 2010 (Act 806).
38. Section 3(5) of the Statutes of the University of Ghana: 'A person shall not be nominated and elected to the Office of Chancellor unless he or she satisfies the requirements of Clause 2(b)-(e) Article 94 of the Constitution of the Republic of Ghana.'
39. Article 68 (1) of the Constitution of the Fourth Republic of Ghana.
40. University of Botswana Act, 1982 (Act 24).
41. Section 5(1) of the University of Botswana Act, 1982 (Act 24).
42. Section 5(3) of the University of Botswana Act, 1982 (Act 24).
43. Rosalyn Higgin refers to a claw-back clause as a limitation clause 'that permits, in normal circumstances, breach of an obligation for a specified number of public reasons'. See 'Derogations Under Human Rights Treaties' in Vol. 48 *British Yearbook of International Law* 281 (1976–77).
44. Table 2 infra.
45. Article 12 of l'Ordonnance N°81/160 du 7 octobre 1981 portant statut du personnel de l'Enseignement Supérieur et Universitaire.
46. Articles 7–15 of l'Ordonnance N°81/160 du 7 octobre 1981 portant statut du personnel de l'Enseignement Supérieur et Universitaire.
47. Articles 20–26 of the l'Ordonnance N°81/160 du 7 octobre 1981 portant statut du personnel de l'Enseignement Supérieur et Universitaire.
48. UNESCO *Recommendation*, Paragraph 16.
49. See Table 3 infra for details.
50. National Board on Higher Education, "Guidelines for Travel to Attend Workshops and Conferences," at 4.

51. UNESCO *Recommendation*, Paragraph 31. See also Paragraph 32: 'Collegial decision-making should encompass decisions regarding the administration and determination of policies of higher education, curricula, research, extension work, the allocation of resources and other related activities, in order to improve academic excellence and quality for the benefit of society at large.'
52. S27(6) of the Higher Education Act, 1997 (Act 101).
53. S26(3) of the Higher Education Act, 1997 (Act 101).
54. S28(4) of the Higher Education Act, 1997 (Act 101).
55. Article 4 Décret n°2007-0167/PR/MENESUP fixant le statut particulier de l'Université de Djibouti.
56. Article 32 Of Law N°27/2013 Of 24/05/2013 Governing Organisation and Functioning of Higher Education.
57. Article 50 of the Higher Education Proclamation.
58. See, e.g. ILO Convention concerning Employment Policy (ILO No. 122), 569 UNTS 65, *entered into force* 15 July 1966 and Article 6 of the ICESCR.
59. Roos, P., and Gatta, M., 2007, 'Gender (In)Equity in the Academy: Subtle Mechanisms and the Reproduction of Inequality'. Available at http://www.yale.edu/ciqle/INAUGURAL%20PAPERS/genderequity507entire.pdf
60. S32(2) of the University of Ghana Act, 2010 (Act 806). Also see s33(1) of the University of Ghana Act, 2010 (Act 806): 'University Council may enact Statutes for carrying this Act into effect and in particular to (a) regulate the (i) appointment, (ii) conditions of service, (iii) termination of appointment.'
61. s51. (1) of the University of Ghana Act, 2010 (Act 806).
62. Article 12 of the Statut Général des Agents Permanents de l'Etat Decret N° 2005-386 du 23 juin 2005.
63. Article 132 of the Statut Général des Agents Permanents de l'Etat Decret N° 2005-386 du 23 juin 2005.
64. Article 51 of the Statut Général des Agents Permanents de l'Etat Decret N° 2005-386 du 23 juin 2005.
65. Article 10 of the Ordonnance n° 2006-007 /CMJD portant organisation de l'Enseignement Supérieur.
66. Article 36 the decret N° 2006-136 /PM portant statut particulier du Corps Des Enseignants Technologues.
67. Article 36 of the decret N° 2006-136 /PM portant statut particulier du Corps Des Enseignants Technologues.
68. The body set up to monitor progress towards international compliance with the UNESCO *Recommendation* and investigate allegations of non-observance. Available at http://www.ilo.org/global/industries-and-sectors/education/WCMS_162256/lang--en/index.htm
69. Such as the Human Rights Committee which monitors compliance with the International Covenant on Civil and Political Rights.

70. African Commission on Human and Peoples' Rights, *Principles and Guidelines on the Implementation of Economic, Social and Cultural Rights in the African Charter on Human and Peoples' Rights*, at 34 and 36.

71. ACHPR /Res.62(XXXII)02: Resolution on the Adoption of the Declaration of Principles on Freedom of Expression in Africa (2002) The African Commission on Human and Peoples' Rights, meeting at its 32nd Ordinary Session, in Banjul, the Gambia, 17–23 October 2002.

72. The Special Rapporteur on Freedom of Expression was established by the African Commission on Human and Peoples' Rights with the adoption of Resolution 71 at the 36th Ordinary Session held in Dakar, Senegal, 23 November–7 December 2004. At the 42nd session held in Brazzaville, Republic of Congo in November 2007, the Commission decided to renew the mandate of the Special Rapporteur with the following amended title: *Special Rapporteur on Freedom of Expression and Access to Information in Africa*.

73. Dr Blessing Chinsinga, Associate Professor in the Department of Political and Administrative Studies at Chancellor College, University of Malawi (UNIMA), was summoned to the police station over the contents of one of his class lectures in which he gave examples of reasons for popular protest taken from Egypt and Tunisia. He was subsequently dismissed together with other staff. The decision to sack these persons was, however, set aside by the Malawian courts. See CODESRIA, 'Violations and abuses of Academic Freedom in Malawi: CODESRIA Postpones Holding of International Colloquium in Honour of Professor Thandika Mkandawire'. Available at http://www.codesria.org/IMG/article_PDF/article_a1302.pdf

74. As well as keeping a proper record of violations of the right of freedom of expression and publishing this in his/her reports submitted to the African Commission.

75. Relying on Articles 60 and 61 of the African Charter on Human and Peoples' Rights.

76. ACHPRS Communication 313/05.

77. Karran, T. 2009, 'Academic freedom in Europe: time for a Magna Charta? *Higher Education Policy* 22: 163–89.

78. *ibid.*

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# Reconnecting the University to Society: The Role of Knowledge as Public Good in South African Higher Education

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**Abstract**

This article discusses the nature of university–society relations in response to the calls on South African universities for greater social and economic responsiveness driven by external stakeholders. The adoption of constitutional democracy and the provision of institutional autonomy have provided them with considerable freedom to pursue their goals in society. However, they have also left them under considerable pressure from competing interest groups, intensifying the levels of internal and external determination, very often in a conflicting manner. The article argues that current forms of determination (e.g. Constitutional framework, policy and stakeholder demands) on university operations cannot per se provide adequate options for university–society relations. Critical to effective university–society relations is the structure of production and distribution of knowledge. The problem in this regard stems from the failure to recognize the encroachment of the profit motive into the academy (the shift from a public good knowledge/learning regime to a neoliberal knowledge/learning regime). Under such circumstances, progressive virtues (self-development, positive human relations and informed citizenship), democratic principles (equity and social justice) and the commitment to social transformation guided by altruism and common good encapsulated in the South African higher education vision are under serious threat.

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**Résumé**

Cet article traite de la nature des relations entre l'université et la société en réponse aux appels lancés aux universités sud-africaines pour une plus grande réactivité sociale et économique conduite par les parties prenantes externes. L'adoption de la démocratie constitutionnelle et l'octroi de l'autonomie institutionnelle ont donné aux universités une liberté considérable pour l'atteinte de leurs objectifs dans la société. Cependant, cette situation a également mis ces dernières sous la pression considérable des groupes d'intérêts concurrents, intensifiant ainsi les niveaux de domination interne et externe, d'une manière très souvent conflictuelle. L'article soutient que les formes actuelles de détermination (par exemple les cadres constitutionnels, les exigences politiques et celles des parties prenantes) du fonctionnement de l'université ne peuvent pas en soi fournir des options adéquates pour les relations entre l'université et la société. La structure de la production et de la distribution de la connaissance est essentielle pour avoir des relations efficaces entre l'université et la société. Le problème à cet égard découle de l'incapacité à reconnaître l'empiétement de la recherche du profit dans le milieu universitaire (le passage d'un régime public de connaissance/d'apprentissage à un régime néolibéral de connaissance/d'apprentissage). Dans de telles circonstances, les vertus progressistes (l'auto-développement, les relations humaines positives et la citoyenneté consciente), les principes démocratiques (l'équité et la justice sociale) et l'engagement de transformation sociale guidée par l'altruisme et le bien commun ancrés dans la vision de l'enseignement supérieur en Afrique du Sud sont gravement menacés.

## Introduction

This article discusses the nature of university–society relations in response to the calls for greater social and economic responsiveness driven by the increasing and conflicting demands made by external stakeholders on South African universities. The adoption of constitutional democracy and the provision of institutional autonomy have provided South African universities with considerable freedom to pursue their goals in society. However, they have also left them under considerable pressure from competing interest groups, intensifying the levels of internal and external determination, very often in a conflicting manner. This article argues that current forms of determination (e.g. Constitutional framework, policy and stakeholder demands) on university operations cannot per se provide adequate options for university–society relations. Critical to effective university–society relations is the structure of production and distribution of knowledge. The problem at this level stems largely from the failure to recognize the encroachment of the profit motive

into the academy (Slaughter and Leslie 1997: 210), and 'a shift from a public good knowledge/learning regime to an academic neo-liberal knowledge/learning regime' (Slaughter and Rhoades 2004: 8), which Torres (2012) coined 'neo-liberal common sense'. Commodification and commercialization of knowledge, with consequent changing professional values, norms and beliefs dictated by market ethics, dominate university practices. Under such circumstances, progressive virtues (self-development, positive human relations and informed citizenship), democratic principles (equity and social justice) and the commitment to social transformation guided by altruism and common good encapsulated in the South African higher education vision are under serious threat.

Our point of departure is that in the context in which South African universities are situated of neoliberalism with its emphasis on the *economic* and market function of the university rather than on the *social* function, higher education and its articulation in society have become destabilized particularly in the domain of knowledge. Today, academic work as well as institutional output are driven by the global markets and narrow economic concerns (Slaughter and Leslie 1997; Contento 1998), making universities increasingly unresponsive to local social and cultural needs (e.g. social cohesion). The paper proposes the concept of socially embedded knowledge within a socially embedded university. This is premised on four main considerations. First, socially embedded knowledge is a socially engaged mode of knowledge advancement founded on the assumption that knowledge is a public good and based on dialogue, reciprocity and inter-dependence between the university and society, without compromising its institutional integrity. Second, it is embedded in local contextual complexities to account for the legacies of colonialism and apartheid. Third, it embodies the peculiarity of the African experience through which it finds its place within the context of global knowledge. Fourth, it integrates theory (the context of production of knowledge) and practice (the context of applicability), and engagement with a community of practitioners.

To this end we project the necessity of an epistemological break of a particular kind by focusing special attention on knowledge as a public good as one way of linking university to society. We acknowledge the diverse nature of universities especially in South Africa in the same way as it is misleading to assume that South Africa consists of a homogenous society. However our case is that universities in South Africa are characterized by some common strands that thread them together in the challenges they confront in society.

## Understanding the Insertion of the University in Society: Context, Concepts and Assumptions

The question of knowledge and university–society relations requires contextualization. Critical to this aspect is the central role of knowledge in university engagement with the developing world, its historicity in the South African context, the position of the university as an institution, its positionality in relation to internal and external stakeholders, and the normative space provided by the National Constitution and subsequent legislative frameworks. We discuss these aspects in the following sub-sections.

### *From the Rubbles of the 'Ivory Tower': The Centrality of Knowledge in Institutional Responsiveness*

The university as an 'ivory tower' refers to an institution above the social order. The notion draws from the Eurocentric conception of knowledge as the *enculturation of the mind* (Sanderson 1993), *disinterested pursuit of knowledge or knowledge as an end in itself* (Muller 2000), *discipline-based knowledge* (Sanderson 1993), *citizenship education* (Enslin 2003), and *critical thinking and personal autonomy* (Tsui 2002). This is captured by Oakeshott (quoted by Fish 2009) in his distinction between 'learning which is concerned with the degree of understanding necessary to practice a skill, and learning which is expressly focused upon an enterprise of understanding and explaining'. Such a conception entails 'understanding and explaining anything as long as the exercise is not performed with the purpose of intervening in the social and political crises of the moment, as long, that is, as the activity is not regarded as instrumental – valued for its contribution to something more important than itself' (Fish 2009: 1). Having dominated conceptions of the role of the university in society for over a century, Oakeshott's approach to the pursuit of knowledge has come under fierce attack for its perceived inutility and irrelevance in the face of the challenges facing contemporary societies, particularly those in the developing world.

Ramirez (2004) has recently shown that the major universities in the world have changed. In the process, global economies replace national economies; highly skilled innovative workers replace production line workers. Current literature has explained these changes with reference to globalization discourses – technological revolution, global competitiveness and knowledge innovation (Castells 2001). Many analysts have also referred to the rise of a postmodern socio-economic and political order, regarded as fundamentally different from the previous 'modern' era, as being behind these changes (see Abercrombie and Turner 1978). However, these changes cannot solely be explained with reference to global pressures. While globalization and concerns

with economic competitiveness have deeply impacted on South African higher education, they fall short of explaining the range of current pressures around forms of institutional responsiveness centred on equity, nation-building and human rights, inspired by and entrenched in the ideology of a mass democratic movement. In this regard, Ramirez (2004) warns against the tendency to explain higher educational institutional changes almost exclusively with reference to globalization discourses. He points out that some of these changes were driven by specific contextual challenges rooted in national histories and institutional cultures. It is a fundamental part of our analytical pillars to expose what Brumlick has referred to as 'the normative orienting energy' of such discourses, which have become somewhat universalizing and unproblematically accepted in current studies.

There are also drivers related to the structure of knowledge within and across the disciplines. It is now widely accepted that increased focus on responsiveness has led in many instances to a shift from Mode 1 to Mode 2 knowledge approaches (Gibbons et al. 1994), from academic/theoretical to 'professional' programmes that prioritize skills, application and problem solving, with profound implications for research, teaching and learning in the university. Donoghue (2008) in particular argues categorically that 'an ethic of productivity' and efficiency – the ultimate expression of utilitarianism – has already won the day; those academic fields deemed impractical in social and economic domains run the risk of being deemed unnecessary; and academic specialists in these fields may 'come to be seen by everyone (not just those outside the academy) as unaffordable anomalies'. In support, Frank and Grabler (2006: 20) suggest that the content of higher education has also been driven by intrinsic factors related to the changing conceptions of what constitutes valid knowledge in society.

Our question then is: if the world has changed and with it higher education and its conceptions of knowledge, knowledge production and utilization, can the Oakeshottian ideal be justified in today's South African academic context? Most universities in the world have been compelled to abandon their 'ivory tower', 'insular', distant and abstract form for one that is more responsive to the direct needs of society, whether economic, social or cultural. South African universities are no exception.

### *Thinning Boundaries: State, Ruling Party, Government and University Relations*

Jonathan (2006) suggests that the distinction between the concepts of 'ruling party', 'state' and 'government' and their practices in a society in transition from an authoritarian regime to democracy is blurring. Institutions tend to

be conditioned by the layers of ideas emanating from these fields of power. The same could be said about those bodies and groupings which make up civil society and cultural life (Jonathan 2006: 6). In our view, this is also true about the interface between state and civil society. As Jonathan puts it, the relationship between these different layers of power and the university is particularly complex in cases like South Africa where the formal establishment of democracy was 'not through revolution (regime overthrow), not through "replacement" (regime substitution) but through "*transplacement*": the negotiated transfer of power from the old regime to the forces of opposition' (Jonathan 2006: 6). While apartheid state power gave way to democracy, the particular formula agreed through negotiations, based on compromises from contending parties, guaranteed the safeguarding of fundamental continuities across established organs of state and existing social structures that would require systematic transformation later. Under such circumstances, 'compromise' became a principle that would inform all relationships in the political domain, including university–society relations, which, as will be shown, have been structured on the basis of compromises. This principle has shaped the transformation ethos in the country, whereby institutions cannot only follow the logic of things around their own internal determination. How a university structures its relations with society will always be about compromise and object of contestation.

### *A Declaratory Rather than Normative Constitution: Is the Absence of Specification an Asset or Liability?*

While South Africa can claim its uniqueness in having a formal Constitution with a democratic project at the centre of its agenda, its provisions are *declaratory rather than normative*, which, in our view, is desirable (Cross 2015). On the positive side, it opens space for contestation, negotiation, dialogue and consensus building. On the downside, it leaves considerable room for ambiguity and manipulation. While the Constitution set a framework for democratic participation in a democratic state, the substantive dimensions of this state and the nature of democratic participation were to be built through legislation and through appropriate performance of other organs of state under severe constraints imposed by its legacies and continuities. Further, they are open to diverse and very often conflicting interpretations leading to contradictory choices and practices. This can be illustrated by the different discourses emanating from the constitutional provision regarding institutional autonomy and academic freedom. How institutions navigate through this ambiguity depends on their own institutional agency. This has some bearing on current university–society relations. Against this background, we ask the

question as to whether the Constitution is enhancing or constraining current university–society relations in the country.

## A Convoluted Environment: The Prevalence of 'Liberal Common Sense'

Martinez and Garcia (2000) identify the following defining features of neoliberalism: (i) reduction of public expenditure where less government spending is devoted to social services such as health and education; (ii) deregulation by government of private enterprise including everything that could diminish profits; (iii) privatization, as state-owned assets, goods and services are sold to private investors; and (iv) elimination of the concept of 'public good' or 'community' and its replacement with individual responsibility, whilst the underprivileged in society have to find their own solutions to social problems such as healthcare and education. Nationally, neoliberalism gained expression through the government's macro-economic framework – Growth, Expansion and Redistribution (GEAR) – which places emphasis on fiscal controls, efficiency and cost-effectiveness. In higher education, it represents the integration of the university into the new economy (global economy), and more specifically, how faculty, students, administrators and academic professionals use 'a variety of state resources to create new circuits of knowledge that link higher education institutions to the new economy' (Slaughter and Rhoades 2004: 1). Neoliberalism reflects the encroachment of the profit motive into the academy (Slaughter and Leslie 1997: 210). This new trend is reflected in recent literature through descriptors such as: 'academic capitalism' (Slaughter and Rhoades 2004; Munch 2014); the 'entrepreneurial university'; the 'exchange university' and 'corporatization of academic culture' (Chan and Fisher 2008); 'the morphing of academic practice' (MacFarlane 2011); and transition from 'Homo Academicus to Homo Oeconomicus'. Even more extreme are those apocalyptic images such as 'the university in ruins' (Readings 2006); 'the last professors' (Donoghue 2008); 'the academic dean: an imperilled species' (Gmelch 1994), inspired by nostalgia for the old days where knowledge concerns prevailed over profiteering. But in this scenario, is university knowledge production and dissemination a public good?

### *Knowledge as a Public Good*

The way university education and research are provided, produced and financed brings to the fore the concept of public good. From an economist's perspective (see Samuelson 1954; also Musgrave 1959) public goods are those that are *non-excludable* meaning goods that cannot be provided exclusively to some individuals or that some people cannot be excluded from consuming them, and

are *non-rivalrous*, i.e. their consumption by some does not affect other people negatively (see Tilak 2008a). In addition to these two central tenets, public goods generate a large quantum of externalities, basically known as social or public benefits. An important implication of public goods is that they have to be financed by the state out of general revenues, without necessarily relying on prices or any user charges like student fees (Tilak 2008b). Their consumption is generally made accessible to all and they are not subject to competition. However, while we acknowledge that the distinction between public and private goods tends to assume a 'technical' and 'ideological' orientation and that classification of public goods is not absolute, we hold that stakeholders including government policies, market conditions, level of development and political realities are quite central in decisions concerning public goods. After all, public goods have been provided since the Middle Ages, and hence they need to be redefined time and again in consideration of changing political realities (Desai 2003).

***Narrow Utilitarianism Centred on Economic Benefits and Narrow Conceptions of Knowledge Driven by Workplace Demands***

We refer here to entrenchment of narrow utilitarianism/instrumentalism that emphasizes the economic (with emphasis on profiteering and meeting the demands of the markets) rather than the social function of the university. Utilitarian discourses advocate direct benefits of higher education to the individual and society beyond the cultivation of the mind. As an instrumentalist discourse, utilitarianism vacillates from narrow emphasis on economic benefits through utility-based knowledge related to the world of work and pragmatic skills-based approaches (Kraak 2000: 14) to the emphasis on wider societal benefits in terms of inculcation and promotion of social values such as human rights, social justice, equality and equity. As a result, universities are turning to skills development and professionalization of the curriculum for workplace readiness at the expense of the general and knowledge perceived as theoretical or academic (Gibbons et al. 1994; Ensor 2002). The emphasis is placed on inter- and multi-displinary knowledge, applied knowledge (or Mode I vis-à-vis Mode II forms of knowledge), problem solving skills and responsiveness to the job markets.

***Encroachment of an Accumulation Capitalist Rationality***

An important point of contention that has been overlooked by institutional managers is the subtle replacement of the idea of knowledge as public good with that of profit. Munch (2014: 93) argues that academic capitalism is driven by the belief that academic success in today's competitive global environment

is on the one hand decided by the availability of two forms of capital. First, material capital, money, when investment in scientific undertakings can be measured with reference to the material benefits they bring to the institution. Second, its transformation into symbolic capital, prestige or reputation, when investments in projects are linked to the expected symbolic revenues, for example publications in high impact journals or top national or international institutional rankings (Munch 2014: 114). For Munch, the accumulated symbolic capital helps to repel or deal with competitors while the accumulated monetary capital can be used to attract reputed human assets. South African institutional managers tend to believe that managerialism, university rankings and academic ratings are here to stay; they have become *a global fact.* While this may be true, it should not go without convincing problematization.

***Constitutive Technology: Managerialism***

The rise of managerialism in South African universities has eroded the autonomy of academic work and reconfigured both institutional and academic staff identities (Henkel 2005: 155). Institutionally, it has imposed new agendas (university enterprises, income generation programmes, public and private partnerships for business, etc.) and new decision making mechanisms (Senior Management Teams, etc.). Four aspects are worth highlighting. First, managerialism imposes a centralized and somewhat autocratic management style based on the assumption that the logic of things in industry can trigger better performance and outcomes in the university. Metz (2014) argues that this has engendered undesirable consequences in areas such as promotion criteria, research incentives, teaching oversight, equity assessment, performance review and decision making. Second, new layers of managers are added to the university bureaucracy to strengthen compliance with institutional strategies (Johnson and Cross 2006), particularly those that align research, knowledge and courses with national and institutional goals dictated by cost, efficiency and the markets. Third, managerialism has a constitutive role in that it promotes new academic identities largely by constraining critical engagement. Fourth, it elevates measurement in academic practice (numbers of publications, publications in high impact journals, citations, etc.) to enhance institutional and faculty rankings and ratings. The logic is as follows: more publications, more publications in high impact journals, more citations = higher rankings and ratings = reputation (simplicity capital) and more money (material capital). These practices are increasingly becoming *institutional facts* (hence common sense), i.e. are becoming assumed as aspects of institutional life against which we conduct our academic practice (Searle 1995). Overall, this development has affected the traditional role of academics (Kletz and Pallez 2002: 9) by

undermining the academic and intellectual project and relocating power from academics to administrators.

In sum, in the context of neoliberalism, the university and its academic project have become destabilized. The university tends to be aligned to the global economy whilst becoming unresponsive to local needs. Consequently, the progressive virtues (self-development, positive human relations, social engagement and informed citizenship) and social transformation, which were associated with a particular kind of academic who advocated public good (and not capital or profit) and was guided by altruism and common good, are fast disappearing.

## Responsiveness: Multifaceted Function of the University

In this section, we discuss university–society relations with reference to stakeholder internal and external determination. By determination we mean the power that interest groups or stakeholders (e.g. government and its agencies – Council on Higher Education (CHE), National Research Foundation (NFR), South African Qualifications Authority (SAQA), Science Councils, business, professional bodies, etc.) exert on university governance and management. A university enjoys internal self-determination when it possesses institutional autonomy, independence and freedom to pursue its own agenda (Pretorius 2003: 16). This may be evidenced in individualized, self-centred, self-indulgent and insular academic pursuits that have little relevance to the society wherein it is located (*ibid.*). Thus knowledge production tends to be seen as an end in itself and not beholden to society for solving social problems (Pretorius 2003: 17). Theoretically, this is the type of institutional predisposition set by the current constitutional provision in South Africa which guarantees institutional autonomy, academic freedom, freedom of expression and related liberties stipulated in the Bill of Rights. This is in contrast to many other African countries, where universities remain under direct government control. In our view, internal determination has been constrained by external stakeholder pressures (some of them misguided) in university governance structures, which reframe or leave little space for genuine institutional academic agency. Academic integrity and autonomy come into question here when the profit motive is used as an incentive to speed things up and compete bypassing values, standards and beliefs associated with traditional research. Under these conditions research innovation means a proliferation of products released as a sign of technological progress but that may not actually have any socially justifiable purpose.

In the case of external determination, the university answers to an external social group that controls decisions as to its mission and practices, creating

a relationship of domination and subordination (Pretorius 2003: 17). The reconstitution of South African universities as stakeholder universities has opened considerable space for the encroachment of external stakeholder pressures through their governance structures and external funding arrangements, which sometimes have led them to pursue narrow academic projects or to privilege economic responsiveness (often reduced to commodification and commercialization of knowledge as a primary function) at the expense of wider social and cultural responsiveness. The shifting modes of state coordination of higher education can be interpreted as attempts to force the university to exercise internal determination more responsibly. In several cases, internal crises, driven by misguided management or Council decisions, have led the Minister of Education to place universities under administration, to subject all universities to strict auditing procedures, and to establish a Transformation Oversight Committee to monitor transformation in higher education, beyond its funding steering mechanisms. Thus, while the South African university is personified as self-determining and independent, we have seen an increasing (often self-created) vulnerability with regard to its engagement with stakeholders. It is against this background that some analysts have argued that the provision of institutional autonomy should best be interpreted as conditional autonomy.

We concur with Pretorius that both internal and external determination are inadequate for repositioning the university in its knowledge relations to society. Pretorius (2003: 13) proposes a socially engaged knowledge generation, which is accomplished by integrating teaching, research and service so that each site provides an opportunity for the diversification of knowledge. He builds his argument on the premise that in a developing society, the university has an obligation to produce knowledge that contributes to development, an assumption we have also endorsed in this paper but not in a narrow economic sense. We use Pretorius's notion of a socially engaged knowledge generation to conceptualize our particular form of articulation of the university–society nexus, which we label as the socially embedded university.

### *Socially Engaged or Socially Embedded University?*

Our first epistemological point of departure in conceptualizing the socially embedded university is the notion of *social embodiment.* Besides responding to higher education demand in context, social embodiment commits the institutions to strive to equip their graduates with appropriate intellectual attitudes and pre-dispositions to operate in a complex world riddled by poverty, social injustice, conflict, bad governments, civil wars, economic collapse, catastrophic epidemics such as HIV/AIDS and Ebola, and the mass exodus of skilled tal-

ents (Wilson-Tagoe 2007: 238), and thus be equipped with a strong sense of moral responsibility. Metaphorically, one could refer to social embodiment as *habitus in habitat*, or institutional habitualization, in that institutions can open themselves to face both the opportunities and challenges offered within the socio-cultural environment in which they operate (*habit*) (Fourcade 2010). This means that institutions can be more or less *context-bound* or *context-independent (disembodied)* in their discourses, policies and academic practices, as the people and institutions surrounding them mediate what universities do.

Our second point concerns the *social embeddedness* of its programmes, interventions and strategies, which requires an appreciation of the institutional and social diversity, and deep understanding of national historical roots and the world context at large. Worth mentioning is also the widening of *social responsibility*, posed by the changing and complex national and global worlds. Having emerged from countries such as the USA, India and South Africa, the socially embedded university was appropriated, redefined and institutionalized within the European Union by the Bologna Declaration of a university that is 'broadly accessible', 'socially useful' and 'organisationally flexible'. For Williams (1997: 103), accessibility is about giving access to information, guidance, funding and financial support, admission procedures, credit for existing skills and knowledge, relevant knowledge and curricula, buildings (facilities), a variety of courses and modes of study, differing learning processes, a supportive environment, a variety of certification and accreditation mechanisms, and a range of vocational and occupational outcomes. Social usefulness ties the university to social progress, i.e. universities should function as motors of progress in a globally competitive environment. A good system is highly diversified, inclusive, performing, relevant and working for all. This concept is also becoming popular beyond the European Union boundaries, including in the African continent. For example, the 1972 Association of African Universities workshop in Accra endorsed the importance of universities in newly independent African countries as *development universities* (Yesufu 1973). In Sawyerr's view, the development university is 'a new institution (that can) help African nations build up their capacity to develop and manage their resources, alleviate poverty of the majority of their people, and close the gap between them and the developed world' (Sawyerr 2005: 2). We propose in the following section that given its peculiar history, for a South African university (or any other African university) to fulfill its mission, a paradigm shift is required that emphasizes epistemological, ethical and political responsibility in research-based knowledge production and utilization.

## Repositioning the African University: The Need for an Epistemological and Ethical Break

In this section, we argue that at the core of effective university–society relations is the nature of the knowledge contribution that the university makes to society. In the case of a university in South Africa, the production of such knowledge necessitates a great deal of epistemological, ethical and political responsibility to ensure that it engages with and reflects the identity of the society it is supposed to serve, and that the knowledge it generates is relevant and responsive to the needs of the people. This means that the university in South Africa should be primarily a site for the production and distribution of new knowledge in the context of African experience alongside the global experience. We build this argument on three important premises. First, we suggest that the *responsibility of being a South African and an African university* requires that in so far as knowledge production is concerned it must be rooted in its historical-cultural milieu (its comparative advantage), grounded in African experience (its epistemological basis) without being an insular or parochial entity (ghettoization from the global world). This is grounded in Kwame Nkrumah's affirmation that 'We must in the development of our universities bear in mind that once it has been planted in the African soil it must take root amidst African traditions and cultures' (Nkrumah 1956). The African experience is not only the 'foundation' of all forms of knowledge, but also the 'source' for the construction of that knowledge (Ramose 2003). It draws its inspiration from its environment, as an indigenous tree growing from a seed that is planted and nurtured in African soil (Magkoba 2005: 14). It is from its insertion in its context – its embeddedness – and its translation of the experience of that context into locally and globally relevant knowledge – its embodiment and engagement – that strengths to its own competitive advantage on the international stage are derived, and from which international reputation and recognition, so much desired, should be achieved.

Second, African universities can only play a strong and sustainable role on the global stage if their international reputation is achieved through local excellence or, in other words, if their *world-classness* becomes an expression of their *Africanness*. A university is truly a world class university when it has a strong sense of itself, plays a transformational role in the development of the society in which it operates in ways that stretches local knowledge horizons into the global arena 'without losing its soul' and thus makes a meaningful contribution to global knowledge. In this sense, as Makgoba (2005: 24) puts it, 'our universities should be unmistakably African, in the same sense that Harvard, Yale and Stanford are unmistakably American; and in the same way that Oxford, Manchester and London are English; and in the same way that

Edinburgh, St Andrews and Dundee are Scottish' (Magkoba 2005: 14). A professor referring to Wits University recently reinforced this claim as follows:

> [ext] The University [Wits University] as it is thought of is an African University cut off historically from the continent... It must engage with the rest of Africa. If it is going to have the pretension . . . that it is a world-class university, it is not going to be a world-class university by trying to replicate . . . Harvard or Oxford or the orientation northward . . . The way this University will be a world-class university is if it's perceived by the rest of the world as the place to go to for expertise. On what? 'Africa'. (Quoted in Cross 1992: 86) [ends]Like any other African universities, South African universities in their traditional role, just as universities elsewhere around the globe, have 'an obligation to their social milieu for the preservation, the imparting and the generation of knowledge (Makgoba 1997: 179). Makgoba (*ibid.*) warns however that 'it is important to recognise…that the imparting of inappropriate or irrelevant education, even of the highest calibre, would . . . lead to a poor and ineffective product'. Thus university education has to be relevant not only to the people, but also to the culture and environment in which it is being imparted. Such universities will fulfil Ali Mazrui's conception of an African university; which repositions itself by moving 'from being a multinational corporation to a multicultural corporation'. For Mazrui:
>
> [ext] African university systems have grown up with structural or other links with metropolitan universities in Europe and North America, the African university has continued to be heavily unicultural: it has been more a manifestation of western culture in an African situation than an outgrowth of African culture itself (Mazrui 2003: 152). [ends]

Third, different foundations exist for the construction of pyramids of knowledge depending on the social, economic, political and historical conditions of the people they serve and the environment in which they operate. Each pyramid is unique by its very nature and should enter into genuine and *critical dialogical encounter with other pyramids of knowledge* as an equal partner, facilitate a critical emancipatory approach to solve the problems of their people and produce the material and capacities for Africans to determine their own future(s), which requires the production of knowledge which is relevant, effective and empowering (Letsekha 2013: 7). Worth mentioning is the promise made by postmodernism in the late 1980s with its discourse of recognition and legiti-

mation of subjugated knowledges or silenced voices, i.e. the post-structuralist understanding 'that all groups have a right to speak for themselves, in their own voice, and to have that voice accepted as authentic and legitimate' (Harvey 1989: 48). It created spaces for marginalized voices to speak their own knowledges, and drew attention *to other worlds and to other voices* that had for too long been silenced (Harvey 1989: 48), a novel idea we seem to have forgotten. We provide a critical argument for a movement towards a reorganized and reconstituted space, where epistemologies acknowledge the diversity of both local and exotic human ideas, and knowledge thus becomes a tool with which individuals negotiate the complexities of everyday life (Barnett 2009). This is an area that has become extremely vulnerable under the neoliberal utilitarian economism, which privileges the global in knowledge hierarchies.

Fourth, related to the previous point is the *politics of knowledge* at both national and international scales, currently exacerbated by the neoliberal rationality brought about by the global discourse of rankings and ratings, which has increasingly sidelined the local (knowledge, publications, etc.) and the contextual responsiveness that is needed. There is an element of *hierarchy* of authority and unequal distribution of power in current hierarchies of knowledge. Knowledge is produced within political structures and when created and disseminated it charts the lines and patterns of power that exist in society (Wills 2014). Weiler draws our attention to at least four facets of the knowledge–power dynamic, namely: (i) the paramount importance of hierarchies in the existing knowledge order (e.g. global knowledge vis-à-vis local knowledge); (ii) the relationship of reciprocal legitimation between knowledge and power; (iii) the transnational division of labour in the contemporary knowledge order; and (iv) the political economy of the commercialization of knowledge (Weiler 2011: 2). In such scenarios, a knowledge system has a centre and peripheries in terms of the production and distribution of knowledge. Africa, as a continent, finds itself on the very edge of the knowledge periphery (Altbach 1987) and appears to be increasingly isolated from the centre (Teferra and Altbach 2004).

In our own institutions, knowledge disseminated through local publishers or scholarly journals is rated second class and deserving of less rewards than knowledge disseminated internationally. Today most of the so-called high-impact journals in social sciences and humanities hardly consider particular studies on a specific African country, and give preference to articles that sweep over the entire continent or regions – products of helicopter research. Many African universities are frequently linked by their participation in an international system of knowledge distribution. For these universities, the evaluation of the scholarly work of their faculty members and students, their

research proposals, manuscripts, and publications that verify the key incentives of their intellectual life, are all controlled from Europe and America as the centre. This raises the question of the place of university knowledge as a local public good. In other words, what benefits do South Africans get from these research exports?

Fifth, as universities on the African continent have not been saved from the baggage of irrelevance bequeathed by colonialism and apartheid, we regard *epistemological emancipation of university education* from the hegemony of western-imposed knowledge systems as the central instrument for true knowledge production relevant to Africa. Contemporary epistemologies in African universities suffer from Eurocentrism characterized by a biased and skewed mainstream scholarship rooted in western scientism that coerces faculty and students to 'adhere to the paradigms that do not reflect their knowledge or experience of the world' (Lowy 1995: 728). Universities in Africa have been criticized for being mirror images of western epistemology and for operating in rather imitative and replicating fashion (Makgoba 1997: 174). Recent literature has been flooded by an abundance of epithets and descriptors of this problem: 'epistemological imperialism' (Osha 2011: 152), 'epistemicide' (Ramose 2003), 'epistemological authoritarianism' (Kaphagawani 1998), 'epistemic injustice' (Fricker 2009) and 'paradigmatic tyranny' (Rahnema 2001). Against this background, universities in South Africa must be seen to be both *acting to change* borrowed or imposed epistemologies, and *acting to change themselves* and their priorities in response to the social imperatives that press themselves upon them, such as catering for the complex challenges in the continent.

We therefore argue for the need to *re-contextualize and transform university epistemologies* as a prerequisite for an authentic postcolonial African university. *R*e-contextualization is a way 'to reinvent the African university' by producing knowledge and creating institutions that can translate that knowledge effectively in African communities (Wilson-Tagoe 2007). The rationale for Africanization and the transformation of epistemologies in the African university is not a simple issue of structure, but rather it is about how the knowledge systems therein reflect African ownership and democratic participation. In this regard, Nabudere calls for endogenization of epistemologies that will save African universities from becoming 'satellite universities of other universities outside the African continent serving outside interests and agendas instead of serving the African people' (Nabudere 2003: 6). We borrow from Bourdieu the concept of 'epistemological break' not just to refer to this critical moment where a new theoretical consciousness is emerging, but also to refer to the modes of vigilance required for achieving epistemological

emancipation and truthful outcomes in knowledge generation. Such an exercise will require scholars in African universities to be reflexive about their own epistemic positioning.

In line with the concept of responsiveness attached to the socially embedded university, a route towards epistemological emancipation may also entail a shift from closed knowledge systems (controlled and driven by canonical norms of traditional disciplines and by collegially-recognized authority) to more open knowledge systems (in dynamic interaction with external social interests, 'consumer' or 'client' demand, and other processes of knowledge generation). This is an idea already embraced by the South African National Commission on Higher Education (NCHE 1996: 4). Such interaction would lead to the incorporation of the perspectives and values of previously silenced groups into the educational and cognitive culture of institutions.

## Conclusion

We have acknowledged that universities assist with the creation, advancement, absorption and dissemination of knowledge through research and teaching; hence that they are nurseries of ideas, innovation, development and tanks of knowledge. But to fulfil this mandate, they embrace social and market values differently, depending on surrounding contextual complexities that confront them, the type of institutions they choose to be, and the discourses that mediate their academic projects and practices, that is, the dialectical interplay of internal and external determination that may enhance or constrain their institutional agency. Currently institutional agency cannot be understood separately from the dominance of neoliberalism promoted by global economic networks, the interplay of global competitiveness and knowledge innovation discourses with context-based popular democratic discourses rooted in social justice. The impact of these factors can be seen in the choices around entrepreneurial practices manifested through commodification, commercialization and marketization of knowledge, which is no longer perceived as a public good. This trend has reconstituted academic identities, changed conceptions and practices of knowledge, and reconfigured university–society relations. As a result, South African universities are increasingly leaning towards the markets, with concomitant detrimental effects on earlier efforts to promote race, gender and class equity as envisaged in the South African higher education vision. Earlier efforts to restructure universities to respond to popular demand and the public good, including expansion of access and the adoption of affirmative action strategies, have been met with considerable resistance.

Although institutional 'agency' is always critical in the ways universities respond to external determination (e.g. national policy, competition, oppor-

tunities and constraints), we have suggested that the particular form of institutional articulation between universities and their stakeholders lies behind the peculiarity of institutional responses. These responses have resulted in unintended synchronies and synergies between institutional academic projects and the ideology of neoliberalism, which privileges economic rather than social responsiveness, profiteering rather than public good. Under the ideology of 'excellence' and concerns with becoming world-class universities, many institutions are increasingly turning their attention to global rankings and ratings, which very often divert their attention towards global competitiveness at the expense of local responsiveness. As elsewhere in Africa, South African universities have a moral and political responsibility to generate and disseminate knowledge for the common good, which implies a close relationship between the university, knowledge and society.

Having placed the concept of the socially embedded university at the centre of our vision of South African university–society relations, the challenge for higher education scholars is to explore ways of reconciling the tension separating the two competing knowledge projects under the dominance of neoliberalism: market-oriented economic responsiveness vis-à-vis social responsiveness rooted in social justice. This tension cannot be resolved without genuine epistemological emancipation from the hegemony of disempowering western discourses. From the above exposé, it is hoped that researchers and scholars on Africa as well as policy makers will be provoked to confront these unresolved tensions head-on if knowledge production and dissemination in South African universities are to take their central position as a public good.

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# Availability of Study Time for Undergraduate Finance Students at an Open and Distance Learning Institution in South Africa

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**Abstract**

Adult learners at open distance learning institutions often experience increased demands from their employers, families and society. Continuously challenged by time constraints, adult learners are confronted with time allocation decisions of meeting academic responsibilities while maintaining a work–life balance. This research evaluated the time management of adult learners by determining whether adult learners commit the appropriate number of study hours to their academic responsibilities in accordance with the prescribed notional credit hours. An online questionnaire was distributed to a sample of students studying towards a baccalaureate degree in financial management within an academic department at an open distance learning institution. The results suggested that students commit insufficient time to academic responsibilities measured against the notional credit hour system. To manage time better, adult learners should be informed of the rationale behind the notional credit hour system and be introduced to a time management tool whereby those students who fail to make adequate progress should be enrolled on time management courses.

**Résumé**

Les apprenants adultes dans les établissements d'apprentissage ouvert et à distance sont souvent confrontés aux exigences accrues de leurs employeurs, leurs familles et la société. Outre leurs contraintes de temps continues, les apprenants adultes sont sensés gérer leur temps afin de pouvoir assumer

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leurs responsabilités académiques tout en maintenant un équilibre entre leur travail et leur vie personnelle. Cette recherche a évalué la gestion du temps des apprenants adultes pour déterminer s'ils consacrent un nombre d'heures approprié à leurs responsabilités universitaires conformément au quantum horaire national prescrit. Un questionnaire en ligne a été distribué à un échantillon d'étudiants de licence en gestion financière au sein d'un département universitaire dans un établissement d'enseignement ouvert à distance. Les résultats indiquent que les étudiants ne consacrent pas suffisamment de temps à leurs études universitaires, si l'on compare avec le crédit horaire national. Pour mieux gérer le temps, il faut informer les apprenants adultes de la justification du crédit horaire et les imprégner sur un outil de gestion du temps. Ainsi, ceux qui ne parviennent pas à faire des progrès suffisants devront être inscrits aux cours de gestion du temps.

## Introduction

'Recognition that students have limited time is very important', according to Lawless (2010: 110), who commented on the time that students have to devote towards their academic responsibilities. All students experience increasing duties towards their family, cultural responsibilities or employment demands. The strain on adult learners in open distance learning, most of whom form part of the employed economic sector, is continuously challenged by additional responsibilities, which in many cases require them to sacrifice scarce study time in an attempt to maintain work–life balance. This has led to students' study time declining steadily over a number of years (Higher Education Research Institute 2003).

It is generally acknowledged that students face outside pressures such as full-time employment, family responsibilities and financial pressures, to name but a few. However, it should be stressed that the throughput and retention rates of registered students are at this stage essential for the sustainability of universities. An area of concern for a South African university is the continued experience of remarkably low graduation or throughput rates of only 15 per cent for undergraduate and diploma programmes (Mtshali 2013). All South African higher educational institutions operate within a framework set by the government (Davis and Venter 2010). This government framework determines the amount of state funding higher educational institutions receive based on student throughput and retention rates (Pityana 2009). The framework is set to provide guidelines for tuition providers on the standard of these courses. The South African Qualifications Authority (SAQA) makes use of the notional credit system at secondary and tertiary levels throughout the National Qualifications Framework (NQF) level descriptors. The notional credit system is an indicator of the volume of learning required by a learner measured in credits. A single

credit is the application of ten notional study hours where a notional hour of studying includes learning activities such as reading, contact lectures, assessment preparation and individual study, irrespective of the mode of tuition delivery (face-to-face, distance or online) (Academic Development Centre 2009).

Open Distance Learning (ODL) universities in South Africa have a proud history of producing graduates of high quality and calibre at a distance learning institution. For an ODL university to remain in a positive position, systems and procedures must continuously be revised, controlled and updated.

The notional credit system within higher education had been carefully developed more than fifteen years ago (Grové 2001) and although it is assumed to still be accurate and relevant, modern society has changed considerably since that time. On the one hand, these changes have resulted in increased responsibilities, challenges and complexity putting additional strain on the lives of ODL students. It is only natural to assume that these barriers have reduced tuition and study time. On the other hand, some changes could improve the learning experience, such as technological improvements and rates of learning from online materials, as more frequent academic interventions are possible in the academic offer to adult learners. However, after consideration of all these factors, the notional credit system has remained unchanged.

Student throughput rates at any higher educational institution are one of the key determining factors for the amount of public funding that an educational institution will obtain (Pityana 2009). Consequently, it is of the utmost importance to search for possible reasons that contribute to the poor rates of throughput and to identify possible solutions in order to overcome this problem. Research has suggested that more time is needed to teach distance learning courses than traditional residential face-to-face education as educators need to develop course material (National Education Association 2000).

The research on which this article is based investigated whether students devote sufficient time to prepare for and complete course modules based on the notional credit system. This research evaluated the notional credit system of baccalaureate degree within an academic department at an ODL university. In order to verify whether the notional credit hour system has been determined fairly in relation to the number of hours that students commit towards their studies, a sample of 1,828 financial management students within an academic department was drawn.

The principal purpose of the research was therefore to explore the number of hours registered adult ODL students commit towards their studies as recommended by the notional credit system and to address assumptions that could influence the final composition of the mark achieved. Three problems were addressed in the research:

- Whether the notional credit system that an ODL university uses is a fair indication of the number of hours students need to commit towards their studies in order to complete a degree course module.
- Whether a student working in an environment closely related to his or her field of study has an advantage when preparing for a module compared to a student who is not employed within such an environment.
- Whether face-to-face contact sessions in an ODL environment assist a student to succeed in a course module.

The anticipated results of the above-mentioned problems were that:

- Students study fewer hours than required to successfully complete a module as determined by the notional credit system.
- Students who work in an environment closely related to their field of study require fewer hours to prepare for and to complete the specific module successfully in comparison to their counterparts who work in an environment not related to their field of study.
- Students who attend a face-to-face contact session would be more likely to complete a module successfully than students who do not attend face-to-face contact sessions.

The remainder of this paper is structured as follows: discussion of relevant literature and studies that have been conducted on study time allocation of students; description of the research methodology used to obtain data for empirical study; and presentation and discussion of the empirical results. Finally, the conclusion proposes areas for future research.

## Literature Review

Authors from the United States and South Africa have researched the use of the credit hour system (Shedd 2003; Smith 2004; Wellman 2005). This is an enticing area but Tinto (2002) warns that research findings are country specific. Credit hours originated from the United States (US) (Wellman 2005). This substantiates the need for the review of foreign literature. However, Prinsloo contributed largely within the South African environment, asserting that recognition cannot only be attributed to the US for developments in the credit system. Prinsloo, Müller and Du Plessis (2010) recommend that future studies are crucial to develop a country-specific understanding of student behaviour. A South African ODL university was the first one that was referred to as a Distance Education (DE) institution in the modern sense (Tait 2008)

and it is therefore the best South African institution for further development of country-specific research.

South Africa has a specific framework that all Higher Education (HE) entities have to abide by. These policies are set by the government and are overseen by the Council of Higher Education (CHE) (Davis and Venter 2010). Investigation of the credit hour system led to questions on the purpose of a credit hour system. Wellman (2003) reported that the government could use the credit hour system in several ways. It can be a measure of the time spent on a task, a measure of progress towards obtaining a degree, a regulatory tool to enforce certain standards, a control method on quality education and a reporting tool. Pitter, LeMon and Lanham (1996) found in their research that there is a need to determine what the required number of credit hours is that students must obtain for a qualification within a specific discipline. They also concluded that there was a tendency to increase the number of credit hours for a baccalaureate degree.

The key to success is allocating enough time to study for a subject (Davis and Venter 2010). It is acknowledged that students have limited time and that this is an important factor to consider (Lawless 2010).

Nonis and Hudson (2010) investigated Davis and Venter's (2010) assertion by testing the hypothesis that there is a relationship between time spent studying outside of class and academic performance, however, this hypothesis was not supported by the evidence gathered. The researchers further explained that the reason why there was insufficient support for this hypothesis is because there is no measure to determine the quality of the number of hours spent studying. Wright and Mischel (1987), however, suggested that a formula exists to measure academic quality or performance by the multiplication of the student's ability and motivation (Performance = Ability x Motivation).

Succeeding at an ODL university is difficult for many because of constraints such as housing, working hours and inadequate childcare (Tait 2008). Working full-time significantly reduces the probability of passing a subject (Martins 2007). Thurmond and Wambach (2004) advocate that some of these time management aspects can be bridged with interactive learning.

Shedd (2003) performed a study in which she used a survey on the number of credit hours in relation to time spent in class and found that the survey results were incomplete and confusing. This supports the need for further research on this topic and areas that relate to the various aspects thereof. However from a South African perspective a credit is defined as the amount of hours students need to devote towards their studies in order to complete a course module. According to this system, a student has to study for ten hours to accumulate one notional credit hour (McGrath and Nickola 2008). Smith (2004)

stated that for articulation purposes all modules were designed in multiples of twelve credits. A typical semester module of twelve credits would therefore require students to commit to 120 actual hours of study in order to successfully complete the module (Academic Development Centre 2009; McGrath and Nickola 2008; Smith 2004).

Other scholars (Nonis and Hudson 2010; Thurmond and Wambach 2004) identified certain limitations and made some recommendations, which were considered in this study.

## Methodology

The research on which this article is based focused on the time students allocate to preparing for their course modules studying at an ODL university and how they meet the standards regarding the notional credit system as set by the Council of Higher Education (CHE). Ethical clearance was obtained from the institutions' research committees to gather the primary data by means of a questionnaire. The empirical research was formulated to address the three research questions and is presented as three components in this article. The components are:

- The notional credit system is a fair indication of the amount of hours students require to complete a course module.
- A student working in an environment closely related to their field of study has an advantage, academically, when studying for a module as they have prior knowledge of the academic content and can relate to the curriculum outcomes of course modules.
- Discussion classes assist a student at succeeding in a course module.

The main objective of the questionnaire distributed to the sample population was to establish the number of hours students use to study for a module. This objective represents the fundamental aspect of the hypotheses being tested. The data was collected by using an online survey which made it possible to provide students with a better defined structure on the possible number of hours they could have spent on various forms of preparation.

The population for this research included 1,828 students of an academic department of a South African ODL university. The evidence was collected from a sample of students who were enrolled on a baccalaureate degree in financial management offered within the academic department. The sample population is scientifically valuable because the sample group formed part of an academic department and the research can be repeated to extrapolate find-

ings to other fields of study within the ODL university. Therefore the sample population also had the ability to verify the significance of the credit system within higher education (more specifically, the department). Timing for this questionnaire was critical as the final mark for the subjects was released shortly before the primary evidence was collected. Martins (2007) confirmed that correct timing reduces or eliminates the respondents' memory errors. To prevent the duplication of results the research was limited to only investigating certain degree programme modules within an academic department. Duplication could have occurred in a scenario where a student was registered for more than one of the modules used in the research.

Data was analysed by using basic statistical principles, such as calculating a mean or counting the number of respondents in the stratum. A mathematical equation was used to prove or disprove certain assumptions.

The evidence gathered is valid as only the sample group was provided with the address of the online survey via their email addresses. A text message was sent to the population to inform them of the link to the survey that was distributed via email, provided that the ODL institution had a mobile contact number for the student in the population. All communication between the head of the module and the population was monitored by the research team in order to maintain the validity of the research and confirm that there were no external influences on the population.

Empirical data collected successfully reached the objective of determining the time spent on preparation for the summative assessment by students at an ODL university within HE. Secondary data confirmed that foreign and local studies took place and found time allocation to be a relevant measure when referring to a credit hour.

## Findings

The sample population consisted of 1,828 adult learners. From the sample population a 7 per cent response rate was achieved. The average hours spent preparing for a module were calculated based on five aspects of learning. These identified aspects are time spent on:

- studying from the textbook and study guide
- doing calculations from the textbook and study guide
- completing assignments
- working through old examination papers
- accessing information on e-portals, participating in an online discussion forum or downloading additional online study material.

The average number of hours a student spends on preparation for a module is seventy-four hours. This is worth seven notional credits if we consider the definition and interpretation according to the South African perspective of a notional credit (Academic Development Centre 2009; McGrath and Nickola 2008; Smith 2004). The evidence found poor attendance at face-to-face contact sessions as only 28 per cent of respondents attended such sessions. The use of the discussion forum on an e-portal had an even lower percentage of students who actively participated with 61 per cent of students not using the forum and 13 per cent not even being aware of such a forum.

On average, more than 80 per cent of respondents were employed and worked for an average of thirty-six hours every week. This is similar to previous findings that 82 per cent of ODL university students are part-time learners (Pityana 2009). The data also found that 50 per cent of the respondents did work in an organization related to their field of study.

### *Correlation Between Actual Hours Committed to Academic Responsibility and the Throughput Rate*

The degree programme modules that this study was based on are twelve credit modules. As prescribed by the notional credit system students ought to commit at least 120 actual hours for each of these modules in order to pass (McGrath and Nickola 2008). From the analysis of the data gathered, the research found that the average amount of hours students devoted to each of these modules were merely seventy-four hours, which is forty-six hours short of the prescribed minimum per semester. Students committed roughly only two-thirds of the amount of study hours required, which is a cause for concern. The first anticipated finding of this research, namely that students commit too few hours towards their studies, was thus proven correct. The findings suggests that the average student does not allocate enough actual study hours compared to the number of hours required compared to the prescribed number of notional credit hours.

The research substantiates that a reason for poor throughput rates is the time that a student allocates towards academic responsibilities. If one considers a scenario where the students did in fact adhere to the 120 actual hours required, therefore studying an additional forty-six hours, the throughput rate for the modules should have increased. The assumption for the increase in throughput rate would be motivated by the principle of the ‘power of practice’, alternatively the learning curve (Anzanello and Fogliatto 2011; Ritter and Schooler 2002). The average mark scored by respondents in this study was a low 38 per cent. It is expected that the students could have achieved much better results if they had adhered to the number of study hours prescribed. Application of a

mathematical method known as cross multiplication can be used to estimate the average mark a student would obtain if preparation were in line with the recommended number of hours. The following equation permits the calculation of an average mark, assuming the amount of knowledge gained from each single hour of study is constant:

| | | | |
|---|---|---|---|
| Average mark obtained by respondents: | | | 38 per cent |
| Average number of hours studied: | | | 74 hours |
| Required hours of study: | | | 120 hours |
| Therefore: | | | |
| 74 hours | = | 38 per cent | *(calculation 1)* |
| 120 hours | = | x per cent | |
| (0.38÷74) × 120 | = | 62 per cent | (By cross multiplying) |

From the basic principles of mathematics, when solving calculation 1, it is found that students would achieve an average mark of 62 per cent if they committed to the recommended amount of study hours.

A student without any knowledge of a certain task might be able to complete the task, but not without mistakes. After a number of times completing this task, the knowledge that is gained would increase exponentially. When learning ability reaches a plateau the ability to learn decreases and knowledge will only increase by small amounts with extensive practice (also known as 'the learning curve') (Ritter and Schooler 2002).

***The Benefit of Employment in a Financial Industry***

One of the assumptions of this study was that students who are employed in an environment related to their field of study perform better than students working in non-related environments. The logic behind this was the assumption that respondents have a better understanding of the subject when working in an environment that is familiar to their field of study and that they would perform better as they have prior knowledge from work-related experiences. The evidence collected indicated that the average marks of students working in environments related to their study field were 37 per cent, whilst their peers working in non-related fields scored an average mark of 38 per cent. These results suggest that the workplace in which the sample group of students operate is irrelevant to the final mark achieved. There is thus no meaningful relationship between students' performance and the environment in which students work.

The findings thus point in the direction that the main contributing factor to student success is simply the amount of effort a student puts into their studies. This effort should principally involve the studying of learning material and preparing for the summative assessment. Students who do work in areas

familiar to their field of study should indeed earn higher marks, but only after they have already completed the required preparation, which supposes committed preparation of 120 hours per semester.

### *The Effect of Face-to-Face Contact Session Attendance on Student Performance*

On average the final mark for students who attended the face-to-face contact session was 37 per cent, compared to the 38 per cent that the students achieved when not attending a contact session. The one point difference contradicted the assumption that direct contact between a student and a lecturer would enhance opportunity for learning and that the student would therefore achieve a better final mark. However, if interpreted from the 1 per cent difference the data collected might suggest that the contact session served no meaningful purpose with regard to improving student performance and throughput rates. However, since experience has shown that the lecturers in the academic department have to prepare for these classes and concentrate their effort on areas in the study material that students find difficult and challenging to master, another interpretation could be that only less successful students attend, while the more successful students feel that they will be wasting their already scarce time on preparation for these contact sessions. Less successful students therefore require more attention in the contact sessions that could result in a contact session being invaluable for the more successful student.

Results do provide grounds to suspect that some of the respondents who attended a contact session are students who only have very limited time left to prepare, or might think lecturers only address study units that will be tested in the summative assessment. This specific group of students lack the required positive attitude towards academic achievement and therefore do not acquire the additional insight into the study units by attending the contact session. A further appropriate finding could be that both attending and non-attending students lack the required skills and competencies in order to successfully master the learning outcomes for the identified degree programme modules.

## Comparing Student Performance by Considering the Number of Hours Worked Weekly

The evidence collected indicates that nearly all the respondents in the sample population are employed for an average of thirty-six hours a week while studying part-time. The research question relating to the comparison of student performance of employed with unemployed ODL students could therefore not be tested. No clear conclusions could thus be drawn to determine which group of ODL students would outperform the other. Due to this finding, the

hypothesis tested by Nonis and Hudson (2010) could not be confirmed or investigated from a South African perspective.

In view of the findings of this study, the following recommendations are proposed:

- Students need to be informed of the hours required in order to successfully complete each module. This may be done by clearly defining how a credit relates to hours spent studying. Educators should use learning material effectively to communicate the working of a credit hour system.
- Students need to be provided with a time management tool, such as a study programme or academic time journal. Technology-enhanced learning support should be provided such as scheduled e-communications to students on academic progress in learning material.
- Student progress must be tracked by means of regular formative assignments whether online or paper based.
- Students who do not make adequate progress (thirty-six credits per year or three semester modules of twelve credits each) need to be introduced to a module about study methods and time management as part of a student success and retention policy. However, failure following such intervention means such students will have to be deregistered or provided with an opportunity to enrol for an alternative qualification, such as a higher certificate or diploma.

## Conclusion

The purpose of this article was to explore time management of adult learners at DE institutions and to confirm that the measurement of adult learners at DE institutions is an accurate indicator of the time an adult learner should devote towards their academic responsibilities and the number of hours registered DE students commit towards their studies. The results of the research serve as evidence that adult learners within DE institutions do not allocate sufficient study time to their degrees or course modules. The objective of finding an indication of what exactly defines a credit, and what the uses thereof are, remain unchanged. The credit system reveals vulnerability when it is referred to as country specific. South Africa abides by the framework that is set by the Council of Higher Education. The applied credit system has the ability to measure costs incurred by government, measure progress on a task, measure progress towards obtaining a degree or the time a student spend in order to pass a module. The literature suggested that the credit system is correctly applied from a South African perspective.

The research problems raised in this article can now be answered with the following findings:

- Students commit insufficient time to their studies compared to the requirements set out by the notional credit system.
- Students that are employed in environments closely related to their study field do not outperform their counterparts who are not employed in these environments. The environment in which a student works is therefore irrelevant to a student's final mark achieved.
- The attendance of face-to-face contact sessions within an ODL institution serves no meaningful purpose with regard to improving student performance and throughput rates.

From the abovementioned findings it is evident that students fail to adhere to the requirements stipulated by the credit hour system. The results from the research confirm that a reason for the poor throughput rates is the insufficient amount of time allocated towards academic responsibilities. There are numerous reasons why students in the sample group failed to commit to the required hours. Modern society, as we know it today, presents many challenges and additional responsibilities that were absent in earlier times. Specifically referring to the circumstances of the modern ODL student with full-time employment, families to support and other obligations, the time available to master their studies has become limited. An environment that is closely related to a student's field of study does not seem to aid in the achievement of higher final marks. Nevertheless, it is anticipated that students will benefit from working in environments related to their field of study, only after they have managed to study the prescribed number of notional hours. The research results were, however, incomplete to support this general belief, and there is thus an opportunity for further investigation. The finding that the students who attended face-to-face contact sessions did not achieve higher marks than the non-attending students was unexpected.

The limitations of this research were that a response rate of 7 per cent was achieved and that the sample group included only students within one academic department registered for degree programme modules.

It is recommended that this particular study be repeated by other disciplines within HE institutions, as the various disciplines all have unique requirements with regard to the number of notional hours needed in order to complete course modules. This could aid in collecting additional information regarding the time management of adult learners. The information could be used to identify the

most appropriate method to motivate adult learners to devote additional time towards course offers.

South Africa has leading DE institutions and these institutions should be able to improve, evolve and adapt in order to ensure future development and growth with regards to tertiary tuition. The current notional credit system within DE institutions is correctly applied; however interventions are recommended by which adult learners should be informed and motivated to understand the importance of committing the sufficient number of hours towards their studies. This recommendation, if properly executed, may aid in the achievement of higher throughput rates: most academics will agree that student success is achieved with preparation, ability and motivation (Ishler and Upcraft 2005).

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# Towards the Institutionalization of Research Uptake Management in Sub-Saharan African Universities

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**Abstract**

This paper examines the process of research uptake institutionalization taking place at universities in the African context. It explores the importance of the emerging concept of Research Uptake Management (RUM) and provides a rationale for why it is becoming increasingly relevant within the higher education sector, both inside and outside of Africa. In so doing, this paper proposes a conceptual framework for strengthening RUM capacity based on an in-depth analysis of primary source material. It unpacks existing capacity development needs across a selection of African universities within the sub-Saharan region, and examines how universities in a nascent stage of developing RUM practices are approaching the institutionalization of research uptake.

**Résumé**

Cet article examine le processus d'institutionnalisation de l'adoption des résultats de la recherche qui se déroule dans des universités africaines. Il explore l'importance de l'émergence du concept de gestion de l'adoption des résultats de la recherche (RUM) et donne la raison pour laquelle il est de plus en plus pertinent dans le secteur de l'enseignement supérieur, tant à l'intérieur qu'à l'extérieur de l'Afrique. Cet article propose ainsi un cadre conceptuel pour le renforcement des capacités de RUM basé sur une analyse

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approfondie des documents de source primaire. Il énumère les besoins de renforcement des capacités existantes à travers un nombre d'universités africaines sélectionnées dans la région sub-saharienne, et examine comment les universités qui sont dans un stade naissant de développement des pratiques de RUM abordent l'institutionnalisation de l'adoption des résultats de la recherche.

## Introduction and Problem Statement

For many African universities the importance of supporting development through in-service training, community service or via extension activities forms part of their formal missions; however these often remain (especially the community engagement function) marginally institutionalized. Most university-driven development-focused projects take place on an ad hoc basis and are usually driven by individuals and groups of individuals resulting in often tenuous relationships and a lack of continuity (Lazarus et al. 2008; Mugabi 2015). Within this process, the transmission of research findings outside the confines of the campus and to the broader community is a key component. However, the interactive exchange of knowledge between universities and those outside them is often fraught. All too frequently quality research is insulated from those who could benefit from it by a concatenation of attitudinal, practical and procedural impediments (Kirkland, Coates and Mouton 2010).

This is not a new problem, nor one peculiar to Africa, and is a topic that has enjoyed much attention from academics and practitioners. Within this body of scholarship there are many terms used to describe the process by which knowledge generated through research finds its way to those who can make use of it – be they practitioners (health workers, farmers, engineers), policy makers or interested members of the general public. The terms 'diffusion of innovations', 'technology transfer', 'research communication', 'research dissemination', 'knowledge utilization', 'knowledge translation' and 'research into use' are familiar across the university and development sectors. Where 'diffusion', 'transfer' and 'dissemination' imply a limited conceptualization of research broadcast from universities or research institutes, 'utilization' and 'translation' denote the similarly limited activities of end users, as they integrate new understanding into their practical or policy oriented work (Landry, Amara and Lamari 2001; Landry, Lamari and Amara 2003; Majdzadeh et al. 2008 performed in 2006-2007 at the Tehran University of Medical Sciences (TUMS). The term 'research uptake' (RU) is here intended to encompass all of these dimensions and will be used to describe the interaction of both push (supply-side) and pull (demand-side) factors, and related engagement mechanisms and facilitators, across all research exchange processes (DfID 2013).

In practice, RU is a process that seeks to harness a broad range of university units (individual researchers, research boards, public relations offices, libraries, ICT and senior university managers) working in concert to identify, produce and announce research with external applications. Crucially, the efforts of these units will need to proceed in dialogue with the potential consumers of research outputs who are involved in providing real-world feedback on the potential applications of research projects/areas as they are developed (DfID 2013). RU is, therefore, a very complex process that requires universities to confront the challenge of ensuring the accessibility of research processes and findings to a variety of different audiences (both within the university and outside) across a variety of different media, often simultaneously.

Indications of the complex relationship between the supply- and demand-side of RU, as well as a range of barriers and facilitators that apply to each specifically within Africa, were documented within a needs assessment and scoping study conducted in 2010 (Kirkland, Coates and Mouton 2010).

On the supply-side, it was found that although universities in Africa are alert to the importance of managing research, awareness, strategies and mechanisms for explicit support for RU are lacking. Furthermore, the ability to monitor and assess the effectiveness and impact of the uptake of research is deficient (Kirkland, Coates and Mouton 2010).

On the demand-side, the study also identified that generally, external stakeholders may be unaware or naive regarding possible research resources available within universities, and/or may lack the absorptive capacity to make use of research once it has been made available. Moreover, within the African context, additional barriers are often experienced. These include a lack of intermediary structures, a lack of trust in local researchers, the de-institutionalization of research and the influence donor organisations have on determining what and who gets funded – sometimes leading to a distortion of power in policy-making (Carden 2009; Kirkland, Coates and Mouton 2010).

This paper explores a collection of RU mechanisms and practices emerging within sub-Saharan African universities, and examines RUM as a new specialism in research management that addresses the coordination of activities concerned with the successful uptake of research evidence.

The (at present) experimental nature of RU, coupled with the idiosyncratic nature of individual national and university contexts, dictates that there is no one agreed method by which RU good practice becomes routine within an institution; rather, a combination of university specific initiatives, focusing on cultivating strengths and addressing weaknesses, have emerged. Here, we will be concerned with exploring trends within this field across a selection of sub-Saharan universities, with the view to developing a framework in principle for strengthening RU and RUM within similarly situated institutions.

## Literature Review and Current Approach

The study and practice of knowledge utilization have evolved rapidly over the previous decades to emerge as a coherent and integrated body of scientific investigation (Estabrooks et al. 2006; Rogers 1995).

A relatively recent development in the field is the emergence of knowledge translation models, specifically in the field of medicine. Here, recognition is given to the realization that translating knowledge for discrete target audiences is a lengthy and complex process. The approach identifies that a systems-based intervention, built upon a process of stakeholder focused engagement and interaction, is called for (Straus, Tetroe and Graham 2009) health care providers and policy-makers.

Within this context, the strength of networks and relationships cultivated by a university (and individual university staff members) with consumers of research outputs is a key determining factor in effective knowledge transfer. In this the geographic proximity of the actors involved often has a bearing (Jaffe, Trajtenberg and Henderson 1993; Sorenson, Rivkin and Fleming 2006) as evidence of the extent to which knowledge spillovers are geographically localized. We find that citations to domestic patents are more likely to be domestic, and more likely to come from the same state and SMSA as the cited patents, compared with a \"control frequency\" reflecting the pre-existing concentration of related research activity. These effects are particularly significant at the local SMSA. It therefore behoves universities wishing to implement such systems-based changes to carefully consider how they can generate and nurture these networks within their individual geographic contexts.

In seeking to address this issue Ellen et al. (2011), in a review of twenty-six studies in the healthcare field, provide analysis and categorization of infrastructure components found to be effective in knowledge transfer practices. Ellen et al. subsequently drew on these findings in contributions to the WHO's guiding framework for the application of knowledge transfer in the ageing and health sectors. In this document Ellen outlines a range of key aspects in supporting the climate and context for research use. These include linkages and exchange efforts, knowledge creation, push-efforts, pull efforts and evaluation (WHO 2012).

The current study has been heavily influenced by these findings – and the work of Ellen in particular – in seeking to propose a framework appropriate for conceptualizing the systems-based institutionalization of RU within sub-Saharan African universities. From this body of work, five key focus areas integral to this process have been identified (Table 1). It is an exploration and discussion of these areas within the sample group of African universities that forms the basis of this paper.

It is important to note that these key focus areas are all factors that an institution can reasonable expect to directly influence. Ellen and others do discuss a number of external factors that can influence the knowledge transfer process, such as the demand for knowledge from the external environment and the absorptive capacities and skill levels of external consumers of knowledge. These will not be explicitly explored and discussed here, as the purpose of this article is to explore issues that universities themselves can directly influence through internal management and change processes.

**Table 1**: Capacity development focus areas for strengthening RU capacity in an institution (adopted from Ellen et al. 2011)

| | |
|---|---|
| Focus area 1 | The climate for RU and the institutional research context |
| Focus area 2 | Institutionalizing RU into knowledge production processes and support |
| Focus area 3 | Facilitating push factors through exchange |
| Focus area 4 | Facilitating pull factors through exchange |
| Focus area 5 | Monitoring and evaluation efforts |

***Focus Area 1: Climate for RU and the Institutional Research Context***

On an organizational level, culture and context play a role in the nature of RU interventions that can be effectively implemented. This includes organizational processes that may not directly support RU as a mainstream activity of a university, but which, nevertheless, contribute to its effective institutionalization (Humphries et al., 2014 peer-reviewed and grey literature that explores the use of evidence in program management. Specifically, various organizational enablers or contextual factors, such as the mission, vision, goals, culture and rewards system of the university, have been found to contribute to effectiveness in this sphere (Majdzadeh et al. 2008 performed in 2006-2007 at the Tehran University of Medical Sciences (TUMS).

Other studies also highlight the following as possible areas for consideration within this context:

- importance of management skills and infrastructure (Mitton et al. 2007)
- importance of strong, effective leadership (Mitton et al. 2007);
- role of incentive structures, including promotions and assessment criteria (HEFCE 2008);

- importance of an increased awareness of, and higher profile for, RU in the university (HEFCE 2008);
- need to support academics regarding the additional time burden of RU activities (Kirkland, Coates and Mouton 2010);
- harmonization of policies that can influence the nature and effectiveness of RU activity (IP policy, R&D policy, social engagement policy) (HEFCE 2008).

### *Focus Area 2: Institutionalizing RU in Knowledge Production Processes and Support*

On the supply-side, the literature discusses a range of considerations, including the process of knowledge production as well as 'push-factors' through which knowledge becomes disseminated. RU activities need to be integrated into the complete research process and researchers need to start thinking about RU and impact when they scope and design their studies and projects (Grobbelaar and Kirkland 2013). The researcher will, right from the planning stages of a project, need to engage with stakeholders to ensure understanding of the context of the research, scope and budget for RU phases and the legacy phase (Andrews 2005). This will require the establishment of capacity for the co-production of knowledge between researchers and stakeholders and, more specifically from a university's point of view, the development of stakeholder engagement and communication skills among researchers (Humphries et al. 2014) peer-reviewed and grey literature that explores the use of evidence in program management.

### *Focus Area 3: Facilitating Push-factors through Exchange*

A range of other capacity related, and sometimes more subtle and complex, considerations are identified in the literature regarding the process of facilitating push factors, specifically with regards to engaging policy makers and governments.

Due to the limited volume of research conducted by many African universities, there is a lack of adequate, context relevant research for the public good (Grobbelaar and Kirkland 2013). In such situations, governments face a supply shortage of domestically produced ideas and evidence for policy making, which, in turn, can reinforce a dynamic where governments increasingly turn to external sources and expatriates at the expense of local researchers (Stone 2001; Carden 2009).

Further compounding the issues mentioned above, the effectiveness of push-factors may be further complicated through power dynamics, as many policy development processes in Africa remain affected and in some cases

driven by donor funding (Carden 2009). This then leads to a situation in which universities and local organizations may have little say in the design and execution of research and the eventual development of such policies. In many cases African academics are only involved in a part-time capacity as consultants to the full-time employed foreign players with little leeway in spearheading a process informed by local knowledge. This has implications for the development of institutional capacity as well as for the development of a trust relationship between key stakeholders and university staff (Collins and Rhoads 2010).

Moreover, the relationship between the evidence produced and the appropriate solution to policy-issues may not be clear-cut. Often, science is contested and clear answers are lacking, and this can raise issues of censorship, control and ideology (Edwards 2005). Closely linked with this is the validity of research and consideration that epistemologies may lead to different interpretations of knowledge (Edwards 2005; Oliver et al. 2014). Personal contact and opportunities to connect and share challenges and research projects play an important role in combatting these difficulties.

Firstly, the accessibility of information and access to expertise can be supported through public engagement events (e.g. science fairs, radio, TV), publicly accessible databases of university expertise or public involvement in research (content management databases and the library). A number of the universities involved in this study have demonstrated the applicability of these actions.

Secondly, incentives to develop external linkages and support staff to engage with a range of stakeholders can prove effective (Ellen et al. 2011; WHO 2012). Here, mechanisms such as keeping databases of external contacts and potential research users, research networks, community based research and network development, and enterprise focused development of local and international business networks have proved to be effective (PACEC; CBR 2009).

### *Focus Area 4: Facilitating Pull Factors through Exchange*

The development of capacity on the demand-side of the RU equation is often a difficult area for universities to address. Here, the lack of adequate absorptive capacities for new knowledge across a range of areas can pose a challenge for external consumers of research (Becheikh and Ziam 2010). Issues that can impact on absorptive capacities include attitudinal issues such as a lack of interest, a resistance to adapt to new ideas or anti-intellectualist attitudes (Oliver et al. 2014). Inadequate structures in target/stakeholder organizations can also play a role in limited absorptive capacity, as can limitations at the level of staff capacity (Ellen et al. 2011; WHO 2012; Becheikh 2010).

Furthermore, awareness around the very different priorities that politicians and/or policy makers have from researchers is important, just as the politicization of issues may erode the value attached to rigorous research approaches to policy analysis (Stone 2001). Stakeholders in senior positions are often under enormous time pressure, with many issues and problems competing for their time, which may further impact on perceived demand for research (Edwards 2005).

Proactive measures to ensure awareness and the presence of university staff on forums and advisory bodies can assist in stimulating demand for research, collaborative research projects or industry sabbaticals for academics (PACEC; CBR 2009).

***Focus Area 5: Evaluation Efforts***

A review of organizational level frameworks confirm that some progress has been made in terms of how to evaluate the effectiveness of RU activities and mechanisms on an institutional level (Hart and Northmore 2010; Hughes, Ulrichsen and Moore 2010). However, to date, there have been few rigorous evaluations of such initiatives at an institutional level (Ellen et al. 2011; WHO 2012). It is hoped that the findings of this article will inform future studies in this area.

## Methodology and Source Material

A mixed method approach was utilized for gathering quantitative and qualitative data for this study. Primary data gathering took place over a two-and-a-half year period (2012–14) within the context of the Department for International Development's (DfID) funded programme: Development Research Uptake in Sub-Saharan Africa (DRUSSA) (DfID 2014).

This article predominantly draws on the data and analysis of two benchmarking surveys completed through the DRUSSA programme, one administered in 2012 (Falk, Harber and Roberts 2012) and another in 2014 (Falk, Harber and Roberts 2014). The first of these surveyed twenty-four[1] sub-Saharan African universities (across twelve countries) and sought information regarding current practices, planned changes and identified challenges in implementing RU. The following tables outline the universities included in this project from a cross-section in sub-Saharan Africa, namely nine from East Africa, eight from southern Africa and seven from western Africa:

**Table 2**: Eastern African universities that form part of the DRUSSA programme

| East Africa | City | University name |
|---|---|---|
| Ethiopia | Addis Ababa | Addis Ababa University |
| Kenya | Nairobi | University of Nairobi |
| Kenya | Eldoret | Moi University |
| Kenya | Nairobi | Kenyatta University |
| Mauritius | Mauritius | University of Mauritius |
| Rwanda | Butare | National University of Rwanda |
| Rwanda | Kigali | Rwanda Biomedical Centre/Kigali Health Institute |
| Uganda | Mbarara | Mbarara University of Science and Technology (MUST) |
| Uganda | Kampala | Makerere University |

**Table 3**: Southern African universities that form part of the DRUSSA programme

| Southern Africa | City | University name |
|---|---|---|
| Botswana | Gaborone | University of Botswana |
| South Africa | Alice | University of Fort Hare |
| South Africa | Cape Town | Cape Peninsula University of Technology |
| South Africa | Bloemfontein | University of the Free State |
| South Africa | Medunsa | University of Limpopo |
| Zambia | Lusaka | University of Zambia |
| Zimbabwe | Harare | University of Zimbabwe |
| Zimbabwe | Bulawayo | National University of Science and Technology |

**Table 4**: West African universities that form part of the DRUSSA programme

| West Africa | City | University name |
|---|---|---|
| Cameroon | Yaoundé | Université de Yaoundé I |
| Cameroon | Buea | University of Buea |
| Ghana | Accra | University of Ghana |
| Ghana | Kumasi | Kwame Nkrumah University of Science and Technology |
| Nigeria | Ile-Ife | Obafemi Awolowo University |
| Nigeria | Ibadan | University of Ibadan |
| Nigeria | Calabar | University of Calabar |

Upon completion of the first benchmarking survey, senior decision makers from the participating universities took part in a prioritization exercise through which the representatives collectively developed a set of 'Statements of Research Uptake Good Practice' for implementing RUM (Falk, Harle and Roberts 2012). These statements form an integral part of the priorities identified for the implementation of RUM in this article.

A series of campus workshops within each of the participating universities provided information regarding the maturation of approaches taken in relation to the identified priorities over the following two years. The on-going implementation of RUM, alongside attendant challenges and successes, were tracked through the completion of a second benchmarking survey in 2014, which was designed in dialogue with the first survey. The data collected from these campus workshops and the two benchmarking surveys forms the basis of this article's profile of RU within sub-Saharan African universities.

## Priorities for Supporting RU within Sub-Saharan African Universities

The following section illustrates a series of good practice mechanisms and priorities identified by the participating universities in 2012. These were informed by scholarship regarding RU implementation and refined through first-hand consideration of current structures, practices and capabilities within contemporary sub-Saharan African universities.

### *The Climate for RU and the Institutional Research Context*

Through the engagement with these universities, it was clear that although all participants viewed RU as a high priority, the initial introduction of the term Research Uptake was not necessarily viewed as a process that can be managed and institutionalized. Instead it was perceived to have a key focus on the dissemination or push-perspectives. In setting out to frame priorities for establishing an institutional climate for research and RU, the universities agreed that 'the overall mission and strategy of the university should reflect the need to produce findings for wider use' (Falk, Harber and Roberts 2012).

For those institutions where this was already included within their core missions (Kirkland, Coates and Mouton 2010), a more pressing priority was to develop 'a clear research strategy document which explicitly recognises the importance of research for social, economic and development needs' (Falk, Harle and Roberts 2012). The universities also identified that for RU activities to be effective, 'the university's research strategy should explicitly recognise the need to support research uptake activity' (*ibid.*). This was identified as a significant gap in current approaches to RUM and, as we shall see below, subsequent to the establishment of these statements of intent, a number of universities have introduced, or are in the process of introducing, new policy and strategy documents that engage with these priorities (Falk, Harber and Roberts 2014).

The universities observed that these policy and strategy documents will need to be supported across the different units within a university to ensure that the top-down initiatives become institutionalized (*ibid.*). With this in mind, the universities observed that 'detailed research uptake implementation plans/roadmaps/guidelines should be developed at operational level (by the Research Office or similar) to facilitate [the] implementation of policies at department/faculty level and for individual academics' (Falk, Harle and Roberts 2012). The monitoring of such developments is paramount to the institution's on-going approach to RU. The universities specifically note that '[an] institution should collect sufficient information on research uptake activity to inform future policy' (*ibid.*). This is a necessary precondition in establishing and refining achievable, context specific goals to set within RU policy and supporting implementation guides.

### *Institutionalizing RU in Knowledge Production Processes and Support*

As we have seen, it is important for institutions to set realistic goals, and this applies equally to initiatives to integrate RU activities specifically into knowledge production. This will be moderated through the policy direction adopted

by the institution, and, perhaps most pressingly, limited by the resources available. Where possible though, the participating universities identified that an institution 'should support and facilitate research uptake activities in [the] job descriptions of academic staff and, when appropriate, clearly state the expectations on academic staff to be involved in research uptake activities' (*ibid.*).

It was observed that the provision of training, where necessary, needs to be carefully scoped with the view to desired impact and sustainability (*ibid.*). It is also important for institutions to consider how they can build on their existing strengths and anticipate potential future benefits by ensuring that staff with RU responsibility 'have access to appropriate external expertise'; 'have access to designated budgets, for both internal and external research uptake activities', and 'are encouraged to network with similar staff at other universities in the region' (*ibid.*). An overriding axiom for these considerations, also highlighted by the universities, is the need to ensure that any new actions planned 'take into account competing demands on academic time' (*ibid.*).

***Facilitating Push-factors through Exchange***

The effective facilitation of push-factors for RU will, in no small part, be influenced by steps taken by the institution in the spheres of establishing a climate conducive for RU, policy development, knowledge production and staff training. Specifically for academic staff, the universities concurred that 'research uptake activity should be embedded in overall research and community service objectives and should be included in relevant staff induction or postgraduate training programmes' (*ibid.*). It is also considered desirable for clear processes to exist to determine where responsibility lies for RU, between academics/research teams, the university and any external sponsor (*ibid.*).

Within this context, universities will need to focus on the role played by support staff. The universities identified as a priority that 'where professional staff with research uptake responsibilities are based in different offices, clear mechanisms should exist for them to meet with each other and share information on research activities that the university is engaged in' (*ibid.*). This can have broad implications, given the array of different offices and units identified as having an interest in research uptake activities (see Figure 4), and 'clear processes should exist for decisions to be taken about the level of support available for research uptake in specific cases' (*ibid.*).

The effective maintenance of institutional research repositories, by librarians and/or archivists, allows an institution to identify exactly what knowledge it is producing. It is considered a priority for universities to 'have mechanisms in place to identify research with uptake potential at an early stage' (*ibid.*).

This information can then be used to tailor externally facing elements (such as those identified as priorities by the universities themselves) (see Figure 5) to key target groups and audiences (*ibid.*).

### *Facilitating Pull-factors through Exchange*

The universities identified that key to the effective facilitation of pull-factors in RU is the establishment of 'mechanisms for potential users of research to be aware of and, where appropriate, involved in assessing the potential of research at an early stage' (*ibid.*). To this end, there is an ambition to adapt current practices whereby engagement with potential end-users at an early stage of a research project occurs primarily not as a part of university policy, but on an ad hoc basis as required by external funders (Falk, Harber and Roberts 2014), into such engagement occurring as a regular element of the research cycle. One of the priorities identified by the universities in realizing this ambition is that institutions 'should provide, or have access to, qualified staff to assist academics in identifying research suitable for research uptake, and advice on the most appropriate time and means to bring research to external stakeholders and users', as well as providing 'assistance in producing and distributing materials about their work to external audiences' (Falk, Harle and Roberts 2012).

### *Evaluation Methods*

Evaluation methods for assessing the effectiveness of RU activities will necessarily be dictated by the scope of the activities adopted. At least one university has reported the benefit of maintaining a registry of data on project specific RU activities (Falk, Harle and Roberts 2014), and all universities specifically observed that 'mechanisms should exist to review the effectiveness of external communication activities' (Falk, Harber and Roberts 2012). More broadly, the proposed introduction of RU activity reports as a standing item in faculty/department meetings could offer an appropriate avenue for monitoring and scrutiny, which could, in turn, act to support the universities' consideration that appropriate bodies, such as an institutional research committee, 'monitor the progress of research uptake policies at regular intervals' (*ibid.*).

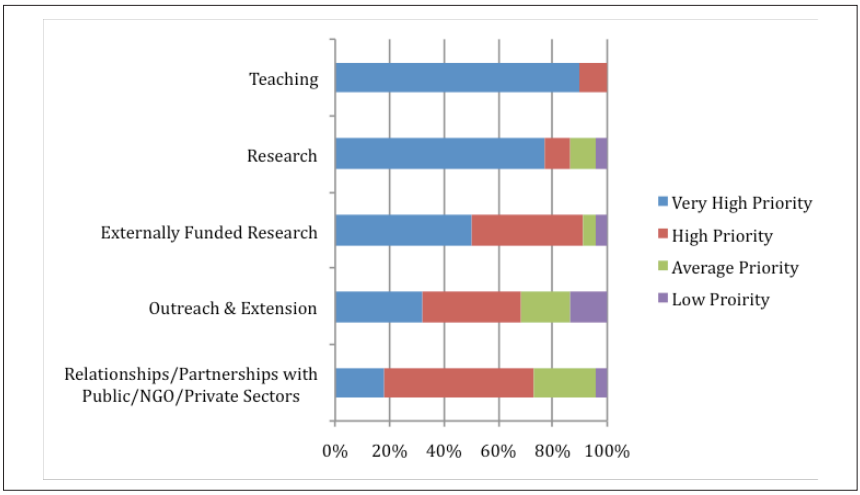
## Current RU Profile at Selected Sub-Saharan Universities

This section examines in detail some of the steps that the participating universities have taken in relation to the priorities and good practice mechanisms identified in 2012. It reflects the current profile of RU implementation within the universities in 2014 relative to 2012, and highlights some of the successes and challenges experienced by the institutions in undertaking these activities.

***Climate for RU and the Institutional Research Climate***

Teaching, research and community service form the core mission of most of the participating universities, and these are often used as assessment criteria in the promotion process (Falk, Harber and Roberts 2014). However, these three elements are not prioritized equally. As can be seen in Figure 1, the role of teaching has a uniformly high or very high priority across the sample. Similarly, research and externally funded research are ranked as high or as very high priorities by upward of 85 per cent of respondents.

**Figure 1**: Universities' ranking of their institutional priority areas, 2014 (N=22)

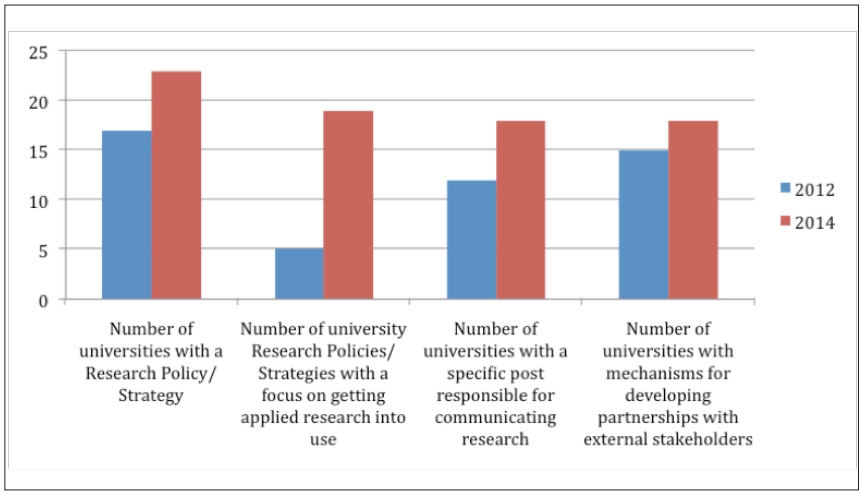



***Source***: Falk, Harber and Roberts 2014.

Within this context, the priority placed upon the production of research outstrips the importance afforded to aspects related to effecting the uptake of the research produced: aspects such as outreach/extension activities and establishing relationships/partnerships with external stakeholders. Yet interest in these activities is growing. The results for 2014 demonstrate an increase, relative to the 2012 results, in the number of representatives who regarded these RU related aspects as a high or very high priority within their institutions. In that year only 40 per cent of representatives rated outreach and extension activities as high or very high; and only 50 per cent gave a high or very high rating to relationships/partnerships with external stakeholders (Falk, Harber and Roberts 2012).

This change in priorities, towards a greater recognition of RU related activities, is starting to be reflected within institutional documents. Twenty-three of the participating universities report that they have a research policy/strategy, and nineteen of these place a focus on getting applied research into use (Figure 2). This represents a modest increase in overall policies, when compared to the seventeen reported in 2012, but a dramatic rise in such policies that place an emphasis on getting research into use, up from five in 2012 (*ibid.*).[2]

**Figure 2**: Comparison of the emergence of developing structures to support RU within participating universities, 2012–14




***Source***: Falk, Harber and Roberts 2014.

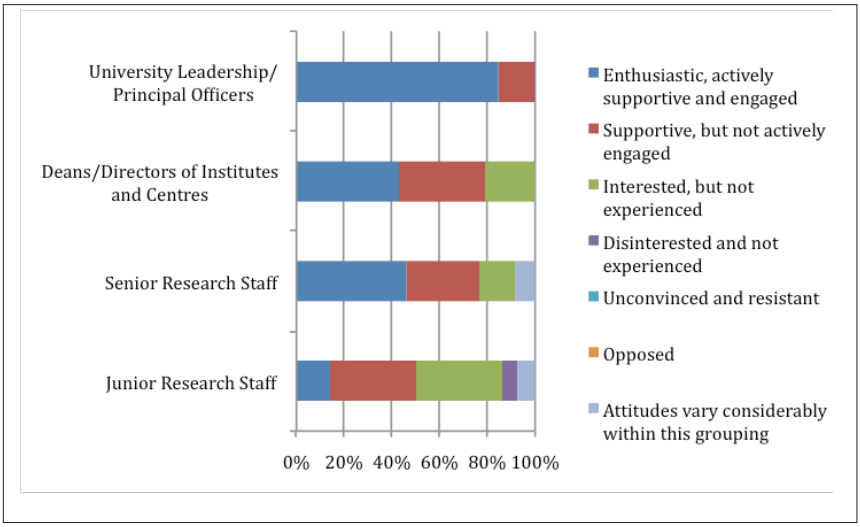
This alteration in policy emphasis has coincided with a rise in the number of universities with a specific post(s) responsible for communicating research, as well as the number of universities which have mechanisms for developing partnerships with the public/NGOs/private sectors. Yet, for many universities, the institutionalization of RU is in its nascent stages. Even within institutions with formally sanctioned legislation, university representatives note that many of the new RU focused policies and positions are insufficiently supported financially or by procedural 'how to' guides and staff training. With regard to staff training and support, only 64 per cent of respondents indicated that their university provides training or resources to academic staff to assist with RU (Falk, Harber and Roberts 2014). More generally, one respondent observed: 'Plans and ideas have been formed, but we have not implemented [them]… The overall time spent on managing this institutionally is a challenge, given

that it competes with other strategic priorities. Resources may be required for a dedicated research uptake manager. We have to spend more time at lower levels e.g. ensuring that research uptake becomes a standing item at faculty level meetings' (*ibid.*).

## Institutionalizing RU into Knowledge Production Processes and Support

Senior management interest and engagement in RU was reportedly very strong in 2014 (the integration of an RU emphasis into institutional policy documents and the creation of specialist roles for communicating research support this). This is broadly echoed amongst both junior and senior academics (Figure 3).

**Figure 3:** Level of interest in RU activity among senior management and researchers, 2014 (N=22)



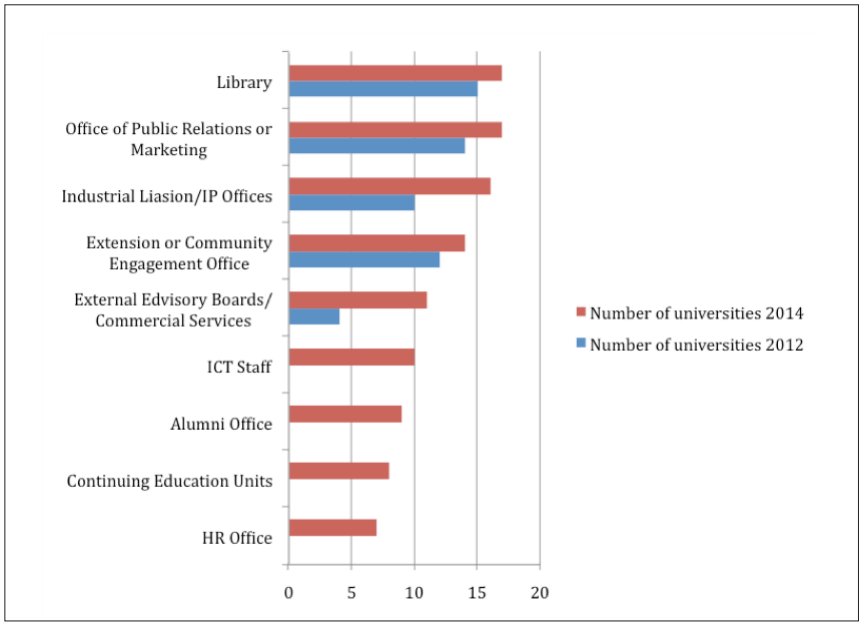

***Source***: Falk, Harber and Roberts 2014.

Yet, less than half of these academic staff members (junior and senior) report that they have taken steps to act upon this interest. A lack of support mechanisms such as the training currently available for staff (noted above) would appear to be a contributing factor here. One respondent noted a number of other contributing factors, including 'inadequate motivation on the part of researchers, inadequate time [and] insufficient research funding to cater for these activities' (Falk, Harber and Roberts 2014).

No university reported that these groups (senior managers and research staff) are outright opposed to RU activities; however, responses that 'attitudes vary considerably within this grouping', present among both junior and senior academics, confirm some reticence. Individual responses, such as the example quoted above, make clear that where academic staff opposition exists, contributing factors are the current lack of incentives for engaging in RU activity, coupled with the demands of heavy teaching workloads.

While interest in RU activity among university leaders and academics can be considered broadly positive, interest is not restricted to these groups and a number of other units across the universities have similarly identified interest. These interests were tracked over the period 2012–14, and the results, reproduced in Figure 4, indicate a broadening base of interest in RU activities.

**Figure 4**: Universities with offices reporting an interest in RU activity 2012–14[3]




***Source***: Falk, Harber Roberts 2014

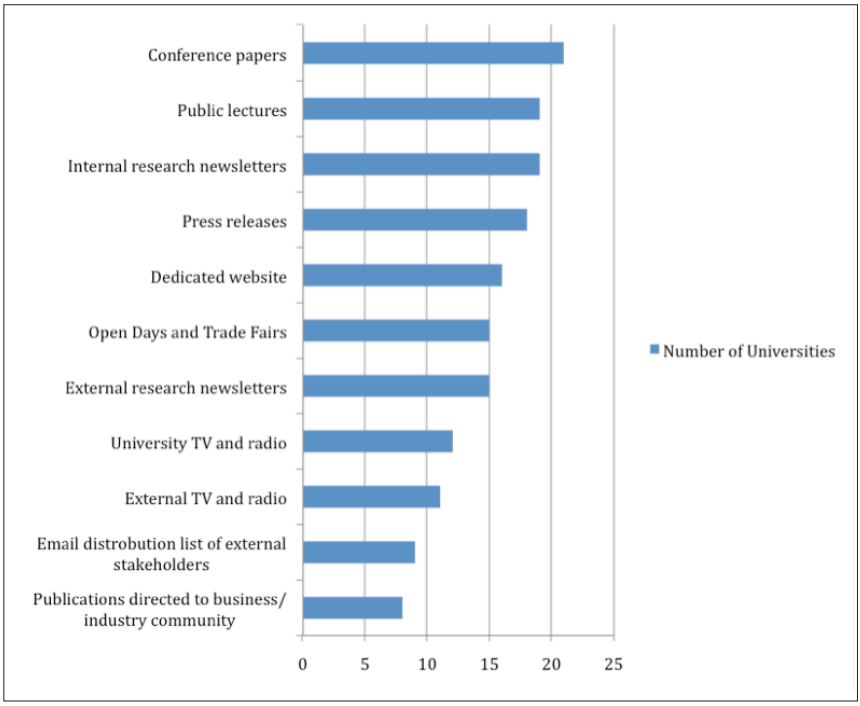
Staff members within a number of these support units can play important roles in the uptake of research findings, yet respondents commonly note that communicating research between units is still difficult and that this has a

detrimental impact on a university's ability to coordinate research dissemination efforts (Falk, Harber and Roberts 2014).

### *Facilitating Push-factors through Exchange*

The organization of university resources to undertake RU activity by disseminating knowledge is understandably different from university to university, although there are a number of activities and communication channels common across the group. As can be seen in Figure 5, the most cited channels for announcing research are through conference papers and a combination of external media (including print, television, radio and social media) and internally produced publications (university newsletters and the university web site). Many universities also report that they employ public-facing events, including open days and conferences, as opportunities to announce research.

**Figure 5**: Research communication channels employed by universities, 2014

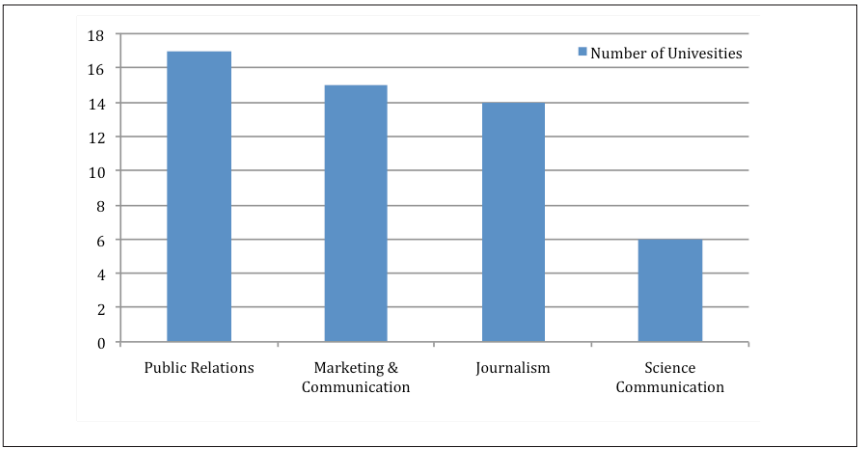



***Source***: Falk, Harber and Roberts 2014.

Eighteen of the universities report that they maintain central offices with responsibility for collating and distributing material on behalf of the university, typically a Public Relations Office or a Marketing and Communications Office working in coordination with departments, faculties and research centres in order to collect the relevant information. These arrangements operate under varying levels of overall control and efficiency; only ten universities report that they have a communications strategy, with a further five universities currently developing such a strategy. This relative lack of coordinated approaches to dissemination is a contributing factor in the difficulty, noted above, in the communication of research between university units.

Systemic difficulties in coordinating and communicating a message about a university's current research are likely exacerbated by a lack of skills capacity among staff, particularly those in externally facing offices. Respondents report that many of those employed within offices responsible for the coordination of institutional publicity have training and experience across a variety of relevant areas, including public relations, journalism and marketing and communication; however only six respondents report that their staff members have qualifications or experience in science communication.

**Figure 6**: Universities with communications staff with training in specific areas of communication, 2014




***Source***: Falk, Harber and Roberts 2014.

The lack of science communication skills is likely a contributing factor where difficulties persist in the communication of research results via marketing or public relations offices. Having said this, some universities are starting to register positive results simply through greater communication and contact between academics and university communications staff. One respondent (an academic) reported that: 'working closer with the marketing department has resulted in more visibility for research, and an increase in focus on research output' (Falk, Harber and Roberts 2014).

### *Facilitating Pull-factors through Exchange*

Universities report that they prioritise a number of different methods designed to generate and foster demand for research outputs among external stakeholders. This covers a whole range of activities specific to an individual research project that occur over the life-span of that project, as well as activities that are embedded within university procedures and structures and impact across whole areas of research.

The majority of respondents (Figure 7) ranked placing government/public sector representatives (73%) and industry/private sector representatives (64%) on university research boards as either a high or a very high priority. Similar results are observed for establishing collaborative research projects with other universities (64%), while approximately half of respondents ranked community–university participatory research partnerships (55%) and collaborative research with non-higher education actors (55%) as high or very high.

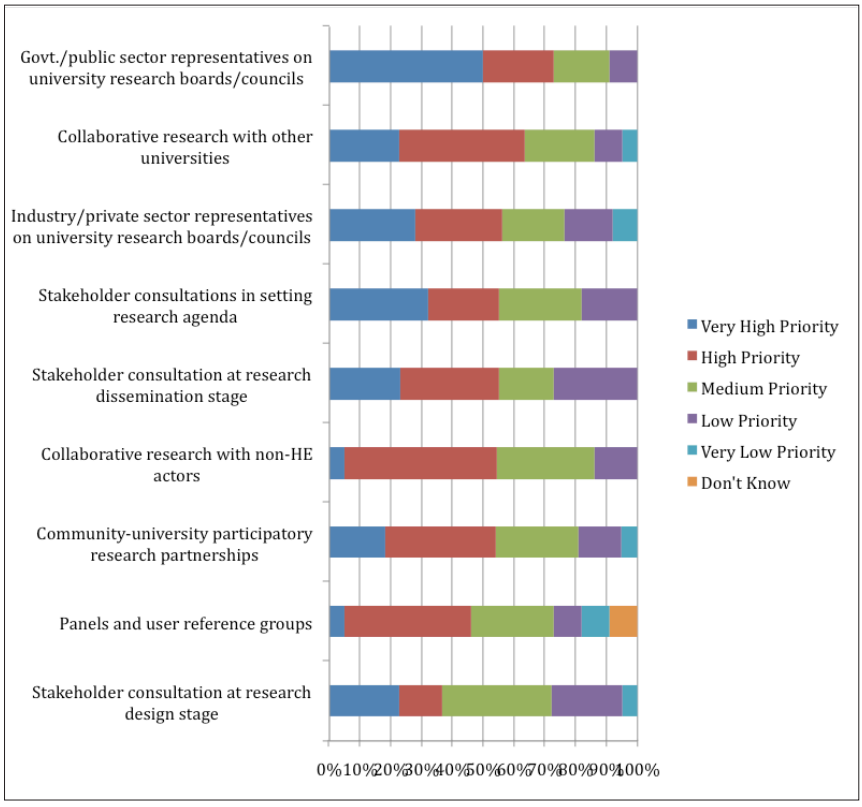
In terms of stakeholder engagement for individual research projects, more universities place greater emphasis upon such activities at the end of the project (the dissemination stage) rather than earlier in the process (the design stage). Within this context, many respondents indicate that the decision to involve external stakeholders in the design aspects of a project is not typically driven by university policy, but is an element of external requirements – usually those of funding agencies – which stipulate that stakeholders and/or beneficiaries of research are involved in the planning/design of the project (Falk, Harle and Roberts 2014).

## Evaluation Methods

Three quarters of respondents in 2014 record that their university maintains a record of institutional research activities, either through institutional repositories or through annual reports. Some respondents also noted that their university maintained records of research activities at the departmental level (such as in the university library, the research office or within individual departments or faculties). These recording practices do not, however, specifically relate to

the recording of the university's dissemination activities. Indeed, over half of respondents (55 per cent) confirm that their university does not maintain records of research dissemination activities. This number is consistent with the responses collected in 2012 (Falk, Harber and Roberts 2012), indicating that there has been little movement on addressing this issue over the two year period (Falk, Harber and Roberts 2014). For those universities starting to move in this direction, there have been some noticeable changes. One respondent noted: 'More projects are demonstrating impact and uptake than in the past, since we started to put an emphasis on monitoring the level of uptake. We also notice that projects that can show uptake tend to be funded a lot easier' (*ibid.*). These findings are an early indication of a nexus between effective RU activities and increased research funding.

**Figure 7**: Universities' priorities for external stakeholder engagement (N=22)




***Source***: Falk, Harber and Roberts 2014.

## Conclusion

The development of staff capacity, implementation procedures and sustainable support for RUM on an institutional level is a challenging process. While there is a general movement towards enshrining RUM in policy and strategy documents and a rising interest among university staff (management, academic and support) for engaging in RU activity, the implementation of RUM is still at a nascent stage both within the institutions examined for this article and more broadly across the sector.

The figure below is intended as an in-principle framework guide for universities similarly in the early stages of RU and RUM engagement. It seeks to capture the lessons learnt from the experiences of the sample universities, and links current challenges to practical responses under each of the five focus areas.

| Key Focus Area | Profile / Challenges to RU in sub-Saharan African universities | RU Priorities in sub-Saharan African universities |
|---|---|---|
| **Institutional climate for research and RU** | • Lack of integration and support for RU activity in institutional mission and vision statements<br>• Lack of integration of RU goals in research strategies and policies<br>• Extension and outreach activities not priorities for universities<br>• Career structures and incentive mechanisms do not foster and support RU activities | • The overall mission and strategy of the university should reflect the need to produce findings for wider use<br>• The university should have a clear research strategy document which explicitly recognizes the importance of research for social, economic and development needs<br>• The university's research strategy should explicitly recognize the need to support RU activity<br>• Detailed RU implementation plans/roadmaps/guidelines should be developed at operational level (by Research Office or similar) to facilitate the implementation of policies at department/faculty level and for individual academics<br>• An institution should collect sufficient information on RU activity to inform future policy |

| | | |
|---|---|---|
| **Knowledge production** | • Lack of strong research culture<br>• Heavy teaching workloads<br>• Staff engaged in consultancy<br>• Limited co-ordination of internal research activities<br>• Need for overview of what research is going on in the university<br>• Deficient infrastructure (e.g. ICT and laboratories) | • The university should support and facilitate RU activities in the job descriptions of academic staff and, when appropriate, clearly state the expectations on academic staff to be involved in RU activities<br>• Staff with RU responsibility should:<br>  • have access to appropriate external expertise<br>  • have access to designated budgets, for both internal and external RU activities<br>  • be encouraged to network with similar staff at other universities in the region.<br>• Policies should take into account competing demands on academic time and, where appropriate, encourage research active academic staff to engage in RU activity |
| **Facilitating push factors** | • Lack of skills and training among staff for planning RU, stakeholder engagement and science communication<br>• Lack of co-ordination among different units within the university regarding RU activity<br>• Unclear accountability for individual and unit roles and responsibilities in RU activities | • RU activity should be embedded in overall research and community service objectives and should be included in relevant staff induction or postgraduate training programmes<br>• Clear processes should exist to determine where responsibility lies for RU, between academics/ research teams, the university and any external sponsor<br>• Where professional staff with RU responsibilities are based in different offices, clear mechanisms should exist for them to meet with |

| | | |
|---|---|---|
| | • Lack of institutional communication and/or marketing strategy<br>• Lack of appropriate funding mechanism to support research activity | each other and share information on research activities that the university is engaged in<br>• Clear processes should exist for decisions to be taken about the level of support available for RU in specific cases<br>• The university should have mechanisms in place to identify research with uptake potential at an early stage |
| **Facilitating pull factors** | • Poorly understood external stakeholder environment<br>• Lack of understanding among external stakeholders of the research process<br>• Unwillingness among academics to engage with external stakeholders during the planning stages of a project<br>• Lack of structures and capacity among external stakeholders to adopt knowledge<br>• Lack of understanding among external stakeholders of what is available from universities | • Universities should develop mechanisms for potential users of research to be aware of and, where appropriate, involved in assessing the potential of research at an early stage<br>• Universities should provide, or have access to, qualified staff to assist academics in identifying research suitable for RU, and advice on the most appropriate time and means to bring research to external stakeholders and users<br>• Academics should be provided assistance in producing and distributing materials about their work to external audiences |

| | | |
|---|---|---|
| **Evaluation methods** | • Limited tracking and evaluation of research impact<br>• Lack of skills and resource capacity to construct and maintain monitoring and evaluation processes | • Supporting M&E capabilities on individual projects or at institutional level<br>• Integrating M&E into policies and annual reports<br>• Sharing success stories to build momentum<br>• The university should maintain a registry of data on project specific RU activities<br>• Mechanisms should exist to review the effectiveness of external communication activities<br>• The university research committee (or equivalent) should monitor the progress of RU policies at regular intervals |

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## Notes

1. There were twenty-four participating universities in 2012. This number fell to twenty-three in 2013, and was reduced again to twenty-two in 2014.
2. It should be noted that interrogation of these figures, through further dialogue with university representatives, indicates that at least four of the new policies/strategies, with a focus on getting research into use, had not been formally implemented at the time of writing; they are undergoing internal review before final approval by the appropriate bodies, and it is anticipated that all will have received this approval over the course of 2015.
3. Those units cited without a value for 2012 were added to the survey following feedback from participating universities during a series of university specific workshops held in 2013 and early 2014.

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