
The impact of institutional differentiation on master's programmes in South Africa

Ana Naidoo and Ari Naidoo

Abstract

This article aims to provide an understanding of challenges faced within higher education when responding to a national call to produce more students with master's and doctor's degrees. We focus on transformation within higher education through White Paper 3 which laid the foundation for change.

The literature review examined differentiation within the context of South African higher education. This research is located within the interpretive paradigm. A mixed methods approach was used with qualitative document analysis as the tool to reinterpret documents containing narrative as well quantitative data.

The South African higher education system has been differentiated according to programme offerings. While policy prescribes programme differentiation there are no parameters determining whether or not a higher education institution is capable of offering a master's programme. This research examines this scenario and offers recommendations.

Introduction

There have been major upheavals in the higher education landscape in South Africa over the last decade. While enrolments in higher education institutions in the past were identified by race, after 1994, issues of equity and transformation have been in the foreground. We focus on transformation within higher education through White Paper 3 (Department of Education (DoE), 1997) which laid the foundation for change. This was followed by the National Plan for Higher Education (Ministry of Education (MoE), 2001) which introduced building blocks for the new landscape. The result has been the creation of three types of higher education institutions (HEIs) all of which are either competing for a greater portion of funding or regarding this as a means of supplementing their income. The National Research Foundation (NRF) is a source of additional funding, so, it was not surprising that when it and Minister Pandor made a national call for HEIs to produce more postgraduates, management at many HEIs were encouraged to comply.

This article aims to provide an understanding of the challenges faced by HEIs when meeting the national call to produce more students with master's and doctor's degrees (Pandor, 2010). It examines the realities that exist in terms of outputs related to the production of master's graduates and recommends how this higher education mismatch can be managed.

Collectively, we have worked at colleges of education, universities and technikons in the past and more recently in a comprehensive university, a university and a university of technology. This experience, together with an interrogation of data provided by the Centre for Higher Education Transformation (CHET) has enabled us to draw conclusions on the offering of master's programmes in higher education.

Towards differentiation

Van Vught's (2007, p.2) definition of differentiation is "a process in which new entities emerge in a system". In terms of the landscape of higher education in South Africa before 1999, there were 36 public higher education institutions, comprising 21 universities and 15 technikons. With the demise of legislated apartheid in South Africa in 1994 each race group, namely, African, White, Indian and Coloured had had specifically designated institutions for their respective tertiary education provision. These are indicated in Table 1 below.

Table 1: Institutions with new entities showing how the mergers occurred

African		White		Indian		Coloured	
University	Technikon	University	Technikon	University	Technikon	University	Technikon
Zululand CU	Northern Gauteng UoT	Cape Town U	Pretoria	Durban- Westville	ML Sultan	Western Cape U	Peninsula
Fort Hare U	North-West	Natal U	Natal UoT				
Transkei CU	East Cape	Pretoria U	Cape UoT				
Venda CU	Border	Witwatersrand U	Vaal Triangle UoT				
University of the North U	Mangosuthu UoT	Port Elizabeth CU	Port Elizabeth				
[MEDUNSA]		Rand Afrikaans CU	Wits				
		Rhodes U	Free State UoT				
VISTA University was "unbundled" (CHE, 2000: 57) and incorporated into Us and UoTs in their geographic areas.		{ North West U [Potchefstroom]					
		Free State U					
		Stellenbosch U					
UNISA, as a university, and Technikon South Africa, as a technikon, enrolled students of all races through distance education. They merged and are now one of the six CUs.							

U = university
CU = comprehensive university
UoT = university of technology

This article is not a historical account of how the present institutions were constituted so only a broad picture of the current differentiated system is provided. Table 1 shows the names of the HEIs before 1999 with an indication of how those mergers occurred. Although 11 institutions are still called universities, six are the result of institutions merging, for instance, either as two full universities or a university and a campus of another institution. During the differentiation process six 'new entities' were created representing comprehensive universities, four being a combination of a university and a technikon while two previously known as universities are now comprehensive universities. Those previously known as technikons are now called universities of technology. The result is that in South Africa, from 36 institutions spanning the binary divide, we now have 11 universities, six comprehensive universities, as well as six universities of technology. In his discussion on differentiation, Birnbaum (1983) turns to Trow's (1979) thoughts on the existence of elite and mass higher education. The higher education landscape in 1994 provided evidence of elite and mass higher education. On the one hand, previously advantaged institutions (see Table 1, white universities) had been well resourced and as they catered for minority groups they had low student-lecturer ratios. On the other hand, previously disadvantaged institutions (see Table 1, African, Indian and Coloured universities) catered for mass higher education, were under-resourced and had high student-lecturer ratios. A similar scenario existed in technikons. While Trow (in Birnbaum, 1983) says that the existence of elite higher education is dependent on the non elite higher education institutions, the South African situation was untenable. Differentiation could not be sustained along the lines of race and inequality.

At an anniversary celebration of CHET in South Africa in 2007, Van Vught's presentation was marked by an absence of any reference to differentiation in South Africa. Even though he explored differentiation in America and Europe his assumptions should also have been applied to the transformed landscape of higher education in South Africa. A scan of Van Vught's (2007) references indicates the debate began in the 1950s and 1960s and continues into the present day. Human rights issues and suppression by the government of the day were priorities in South African higher education before the 1990s. After 1994, the shift to a post-apartheid era meant that higher education in South Africa was part of the transformation agenda.

Van Vught (2007) distinguishes between differentiation and diversity by referring to the latter as static, yet refers to Birnbaum's (1983) work on

external diversity where the focus is on institutional differences. Birnbaum (1983, p.20) believes that a system requires “both co-ordination of the whole and differentiation of the parts. Unless the components being co-ordinated are different in some ways, each from the other, a system does not exist.” It is Birnbaum’s (1983) arguments for diversity that provide a platform for change in higher education in South Africa. He speaks of political needs, of interest groups, labour market needs and meeting the needs of students. Specifically, he says that, “meeting students’ differing needs, a diverse system serves not only the interests of individuals but the interests of the public” (Birnbaum, 1983, p.4).

In post-apartheid South Africa, the government recognised the need for change through the White Paper (DoE, 1997) which was an historic attempt to address the imbalances evident above. As its purpose, it proposed “a single national co-ordinated system” (DoE, 1997, p.17) but “not a uniform system” (DoE, 1997, p.23). One of the challenges was the need to break down national and geographic boundaries. In order to achieve its purpose its goals were, firstly, to expand career-oriented programmes and, secondly, to secure and advance high-level research capacity. The plan was not to create a uniform system and that constitutes the first documented move towards differentiation. The White Paper (DoE, 1997) specifically addressed transformation and issues of equity in higher education. It focused on the learning needs of individuals, the labour market, the development of critical citizens and the creation, sharing and evaluation of knowledge as the purpose of higher education. Equity and redress together with effectiveness and efficiency (DoE, 1997) are two of the eight principles that guide the process of transformation. In analysing the data we will revisit the principle of effectiveness and efficiency.

The aim of the White Paper (DoE, 1997) was to expand career-oriented programmes as well as enrolments in postgraduate programmes. According to Birnbaum (1983, p.40) it is possible to define institutions by basing that definition “upon the highest degree offered”. The analysis of the *National Plan for Higher Education (2001), Transformation and Restructuring: a new institutional landscape for higher education* and the *Higher education qualifications framework* will point towards South Africa’s engagement with differentiation.

By using organisational sociology, Van Vught (2007, p.4) explains differentiation as “purposive” behaviour in social systems. This article draws attention, below, to three of Van Vught’s (2007) four assumptions.

1. Organisations for higher education receive inputs from and produce outputs for their environment.
2. In order to survive, higher education organisations need to secure a continuous and sufficient supply of resources from their environments.
3. When scarcity of resources exists higher education organisations compete with each other to secure a continuous and sufficient supply of resources.

According to Van Vught (2007) institutional isomorphism often forces organisations to mimic each other since they face the same set of environmental conditions. A consequence is de-differentiation or institutions wanting to be similar, which is often caused by competition between academic professionals and government policies.

The national call (Pandor, 2010) for the production of more doctor’s degree graduates and the associated links to funding has made many institutions that do not have resources, aspire to increase their doctoral output. The first assumption above links inputs and outputs of HEIs. Aspiring to increase doctoral output is difficult to achieve if the necessary inputs are not accessible. The result is that competition for resources becomes so great that HEIs have to appoint new staff to help them achieve often unrealistic goals in the postgraduate research domain.

Van Vught (2007, p.12) states that while “government regulation may help to preserve a formally existing level of diversity. . . government initiated merger operations bring about more homogeneity rather than an increase of diversity”. He identifies research (Rhodes, 1990; Skolnik, 1986; Maassen and Potman, 1990) that indicates that innovations in higher education move towards homogenisation rather than diversity.

Methodology

The research question is:

How can the present differentiated system of higher education in South Africa determine the type of master's programme offerings?

Placing the current South African higher education landscape in context the literature review examined differentiation together with proposed principles for change. If we accept that source writers of primary documents are those who “experienced the particular event or behavior” (Johnson, Reynolds and Mycoff, 2008, p.294) and secondary documents are written by people “reading primary documents” (p.294), then in this article we locate ourselves as interpreters of both primary and secondary documents.

There is growing evidence of researchers questioning the dichotomy between primary and secondary analysis (Dargentas, 2006). In the same manner, the quantitative-qualitative research dichotomy has been revisited and has led to the practice of mixed methods research (Cresswell, 2008; Johnson and Onwuegbuzie, 2004; Tashakkori and Teddlie, 2003). While, on the one hand, such fusion could encourage lower levels of rigor in research, on the other, such dichotomies are constructive and need to be seen outside their respective historical contexts and within shifting realities.

In keeping with the notion of dichotomies, qualitative document analysis is different to quantitative content analysis. While the latter generates “a statistical map of the basic contents” (Daymon and Holloway, 2011, p.321), the former analyses text or data based on narratives “although sometimes you might also collect numerical data to support your qualitative evidence” (*ibid.*, p.321). Qualitative document analysis is an attempt to seek patterns initially overlooked. In other words, by re-examining researchers aim to gain a different perspective from the data. In this article we interrogate policy documents (DoE, 1997; MoE, 2001; MoE, 2002; DoE, 2007) in order to establish an overview of transitions that have occurred during the process of differentiation in South African higher education.

Glass (1976, p.3) regards secondary analysis as meta-analysis of research as it “refers to the analysis of analyses”. Although meta-analyses are often located within the quantitative paradigm where large quantities of data are

statistically analysed this is not always the case. Glass is of the opinion that education research has to draw from information that by default will “reside in vast literature that is superciliously scorned and insufficiently respected” (1976, p.8). Seeing that secondary analyses attempt to view existing research through a different lens, these results can vary from primary and meta-analyses of studies of a qualitative nature (Heaton, 1998). An interrogation of the CHET data (2010) allows us to focus only on aspects that impact on the offering of master’s programmes in all three types of HEIs.

Therefore, this research, located within the interpretive paradigm, may be regarded as using a mixed methods approach and qualitative document analysis as a tool in the manner supported by Daymon and Holloway (2011, p.321) where documents will contain text and narratives as well as “numerical data to support” the research.

Analysis

In this section HEIs will be referred to by their new names. Policy documents are analysed to determine their roles in achieving differentiation and the principle of effectiveness and efficiency.

Document 1

While the strategic objective of the Draft National Plan for higher education in South Africa (MoE, 2001) (referred to hereafter as the National Plan) is to “ensure diversity in the organisational form and institutional landscape of the higher education system through its mission and programme differentiation”, it remarks that up to that stage, in most institutions, there was a tendency towards uniformity.

The National Plan rejected the Council on Higher Education’s (2000) view that differentiation should be in terms of set mandates for either teaching or research institutions. It was felt that such structural differentiation would result in rigidity and would, therefore, inhibit institutions. The preferred criteria for differentiation were to address the mission and programme differentiation of an institution. This is in line with Birnbaum’s (1983, p.41) statement that “an element associated with programmatic differentiation is institutional mission”. Technikons were required to produce career-oriented programmes at diploma level, while universities produced a mix of

programmes including research master's and doctor's programmes. If policy was determined by the National Plan (2001), then it is inferred that technikons' main programmes would be diplomas while master's programmes would be offered at universities. It also refers to a "loosening of boundaries" (DoE, 1997, pp.57–58) implying that master's programmes could also be offered at technikons.

The National Plan pointed to the institutional mergers to reduce the overall number of institutions. In order to achieve this, a National Working Group (NWG) was established to make recommendations to the Minister of Education.

Document 2

The next ministerial document, *Transformation and re-structuring: A new institutional landscape for higher education* (MoE, 2002) (hereafter referred to as the Landscape document) specified how institutions would be merged but not all have materialised. Instead of the proposed 21 institutions, currently there are 23. While the Landscape document (MoE, 2002) indicated that four universities and one technikon would be unaffected by the merger proposal, in reality, there was an additional technikon (Mangosuthu) that was unaffected. The Universities of Free State and Western Cape, as well as Fort Hare University were affected to a limited extent. The Landscape document (MoE, 2002) mentions the creation of comprehensive universities for the first time.

This document (MoE, 2002) states that reasons for the creation of comprehensive universities are: increased access; improved articulation between career-focused and general academic programmes; expanded opportunities for research; and enhanced capacity. Comprehensive universities are expected to offer both career-oriented diplomas as well as degrees that progress to doctoral level. In trying to provide greater access for students, career-oriented diplomas lean towards mass higher education while degrees at doctoral level imply elite higher education. Birnbaum (1983) says the existence of elite and mass education constitutes two contradictory values that would lead to tension within an institution. A comprehensive type of institution has to cope with internal diversity (Birnbaum, 1983) in terms of programmes and resources. Institutions representing a merger of a university and a technikon are likely to be better positioned to address the need for resources, for instance, University of Johannesburg, UNISA, Walter Sisulu

University and Nelson Mandela Metropolitan University. That is in contrast with those where there was no merger, such as the Universities of Venda and Zululand, and who now have to incorporate career-oriented programmes at diploma level.

Document 3

The Higher Education Qualifications Framework (HEQF) (DoE, 2007) is designed to do the following:

- To be sufficiently flexible to accommodate different types of HEIs; and
- To facilitate articulation across the HE system.

Characteristic of the framework, the above points accommodate a differentiated system. The HEQF is meant to guide HEIs in the development of their programmes. The array of qualifications span qualification levels 5 to 10 with no specification of institutions needing to offer qualifications at all levels. In terms of addressing student needs at the lowest level, namely higher certificate and advanced certificate, such offerings are an attempt to provide greater access for students. The purpose of these two qualifications is vocational or industry-oriented (DoE, 2007, pp.19–20). The diploma (DoE, 2007, p.21) is seen to be “professional, vocational or industry-specific” while the bachelor’s degree mentions generic areas of study disciplines or professions. In addition, the prerequisite pass at school-leaving level is lower for students wanting to be admitted into a higher certificate than that for admission into a diploma. An even higher level of achievement is required for a bachelor’s degree. Hence, the design of the HEQF has taken into account the Landscape document (MoE, 2002).

Van Vught’s (2007) assumption that differentiation is dependent on inputs that HEIs receive and outputs they produce for the environment, endorses the use of programme offerings to differentiate between institutions. Within the present differentiated system there is further flexibility where not every institution within a specific category – either university, comprehensive university or university of technology – offers programmes at the same qualification framework level.

Focusing on the HEQF in terms of master’s programme requirements it is stated that the programme can be achieved “(1) by completing a single

advanced research project, culminating in the production and acceptance of a thesis or dissertation, or (2) by successfully completing a course work programme requiring a high level of theoretical engagement and intellectual independence and a research project, culminating in the acceptance of a dissertation” (DoE, 2007, p.27). This requirement emphasises the need for supervisors who are competent researchers.

Themes from the document analysis

The analysis of the three sets of documents above indicates the need to address efficiency and effectiveness as well as implementation of the process of differentiation.

Efficiency and effectiveness

The White Paper (DoE, 1997) was created to bring about transformation in the higher education system in South Africa. Its purpose was to create a new and effective system and one challenge would be to tackle the existing “inefficiency and ineffectiveness” (DoE, 1997, p.8). Prominent on the transformation agenda was eradicating the fragmentation, inequality and inefficiency that existed. Efficiency and effectiveness has been included as one of the eight guiding principles of the document.

A strategy proposed by the National Plan (MoE, 2001) was that institutions should declare their respective mission statements and then communicate related programmes. In terms of proposed new postgraduate programmes, institutions were required to “meet the efficiency benchmarks” (MoE, 2001). Section 6 of the document makes reference to the White Paper and re-iterates the need for “ensuring the effective and efficient distribution of programmes” through economies of scale and scope. Collaboration amongst institutions, a first step towards the mergers, was an attempt to achieve measures of efficiency and redress while eliminating inequalities of the past. Programme collaboration is further advocated to ensure the “efficient use of facilities” and “effective utilisation of academic expertise”. The White Paper (DoE, 1997) draws on advice of the CHE in their reference to restructuring the HE system “to ensure. . .the efficient and effective use of resources” as rationale to reduce the existing number of HEIs.

In the Landscape document (MoE, 2002) attention is given to a statement in the report of the NWG, namely, that a restructured higher education system “should enhance the productivity of the system through effectively and efficiently meeting the teaching, skills development and research needs of the country” (MoE, 2002, section 2.1). It should be noted that these needs have to be achieved across the HE system and all three do not necessarily have to be addressed by every institution.

Differentiation

During the apartheid era differentiation in higher education was enforced through racial segregation accompanied by the inequitable distribution of resources (see Fedderke, de Kadt and Luiz, 2000). After 1994 these institutions continued to operate until the release of the White Paper (1997) where transformation was addressed. The CHE (2000) advocated structural differentiation where some institutions would focus only on the undergraduate level, some on becoming postgraduate and research institutions while others on offering intensive master’s and selected doctor’s programmes. This was rejected by the ministry when, in the Landscape document (MoE, 2002), it was announced that a system of differentiation was being developed for higher education. That form of differentiation was aligned to programme and mission differentiation.

It is noteworthy that except for the University of the Western Cape, six institutions (those four mentioned above as well as the Universities of Pretoria and Free State), that were relatively unaffected by the proposed mergers were historically white institutions. They are also what Trow (in Birnbaum, 1983) called elite universities.

The White paper (DoE, 1997), the National Plan (MoE, 2001, section 4.3) and Landscape document (MoE, 2002, section 1) all speak of efficiency and effectiveness. According to Birnbaum (1983, p.5), “the effectiveness of the system increases as institutions differentiate and place primary attention on specific missions and goals”.

Next we examine the state of the efficiency and effectiveness of the differentiated HEIs. Table 2 below is an excerpt from a presentation on *Institutional clusters in Higher Education in South Africa* (CHET, 2010) made at the Higher Education Summit held in Cape Town, using data from

the 2006 to 2008 period. In creating institutional clusters (CHET, 2010) six input variables and three output variables were chosen with which to compare the 23 institutions in South Africa. At the time, UNISA was an outlier in all analyses and excluded from the clustering process.

This article now examines three of those parameters and also excludes UNISA. Firstly, the percentage of master’s and doctor’s headcount enrolments, secondly, the percentage of permanent staff with a doctoral degree and, thirdly, the weighted research output units per permanent academic staff member. The weighted research output was calculated as follows: [the publication units + M research output units + 3x (D research output units)] per staff member.

Table 2: Excerpt from the institutional data presented by CHET (2010)

	Institution	% M + D	Academic staff with doctorate	Weighted research output/academic staff
1.	UCT	18%	58%	2.01
2.	UFS	12%	48%	1.18
3.	UKZN	14%	30%	1.08
4.	NWU	8%	44%	1.19
5.	UP	14%	38%	1.39
6.	US	23%	59%	2.07
7.	WITS	23%	47%	1.54
8.	UFH	7%	20%	0.48
9.	UL	11%	16%	0.32
10.	RU	14%	50%	1.69
11.	UWC	11%	45%	0.91
12.	UJ	5%	21%	0.89
13.	NMMU	7%	34%	0.88
14.	UNIVEN	3%	35%	0.26
15.	WSU	1%	9%	0.04
16.	UZ	5%	37%	0.69
17.	CPUT	3%	11%	0.22
18.	CUT	2%	24%	0.33
19.	DUT	2%	7%	0.13
20.	MUT	0%	5%	0.03
21.	TUT	3%	13%	0.31
22.	VUT	1%	12%	0.12

HEI 3 is the result of the merger of a historically white and historically Indian university. HEI 4 is the merger of a historically white and historically African university. The relatively low figures in either column 3 or 4 could be the consequence of the merger process. HEIs 8 and 9 are two rural and

exclusively African universities while HEI 11 is a so called ‘coloured’ university. It can be seen that amongst universities, HEIs 8 and 9 have the lowest percentage of academic staff with doctorates and the lowest weighted research output. Both these parameters impact on master’s degree enrolments.

In the category of comprehensive universities, the lowest weighted research output is seen to be in two of the historically African universities, namely, HEIs 14 and 15, which are both in rural areas. If proposals of the Landscape document (MoE, 2002) regarding these two institutions had been implemented, then UNIVEN would have been part of the University of Limpopo. Although it was also proposed that at the University of Transkei some “academic programmes. . . should be discontinued” (MoE, 2002) it, together with the merged technikons in the area, became a comprehensive university.¹

HEI 20 with the lowest weighted research output and the lowest percentage of academic staff with doctorates has no master’s and doctor’s enrolments, so it is assumed that this institution has chosen not to focus on postgraduate programmes. The UoTs, in general, produce low weighted research outputs per academic staff member. The figure varies between one weighted research output for every four staff members to one for every eight.

The CHET (2010) presentation indicates there is a high correlation between the percentage of academic staff with doctorates and weighted outputs, as well as between master’s and doctor’s programme enrolments and weighted research output. This becomes clearer when looking at HEI 20. It has the lowest research output with no master’s and doctor’s enrolments and only 5% of the staff with doctorates. On the other hand HEI 6 has the highest research output with the largest number of staff with doctorates and the highest master’s and doctor’s enrolments in all the institutions.

Further justification for focusing on the percentage of academic staff with doctorates, is that in order to supervise master’s students supervisors themselves should have qualifications higher than a master’s degree. In addition, the funding framework (MoE, 2004) indicates that universities are

¹ This article does not engage with whether or not the above proposals were made because institutions were inefficient or that the proposals led to inefficiency. What is being highlighted is that in relation to master’s degree enrollments they appear to be ineffective.

expected to produce 1.25 research outputs per staff member while technikons should produce 0.5 research outputs. It has been established that staff at comprehensive universities should produce between 0.5 units and 1.25 units of research depending on the proportion of technikon to university staff. Following the theme of effectiveness and efficiency in terms of HEIs offering master's programmes we attempt to determine benchmarks for the offering of master's degree programmes within differentiated institutions.

The Landscape document (MoE, 2002) did not prescribe values for variables in each institution but included proposed figures for some. With UWC, whose sustainability was called into question (MoE 2002), one specification was that 12% of the student enrolment needed to be in master's and doctor's programmes. The institution forged from the merger of Rand Afrikaans University and Wits Technikon into a comprehensive university, UJ, was also provided with parameters: 8% of the students needed to be registered for master's and doctor's programmes. In terms of parameters set for a university of technology the specifications for the Western Cape region's merger of two technikons included the prerequisite of 2.5% master's and doctor's degree enrolments as well as 26% of the staff having a master's or doctor's degree. Proportional to the vague parameters for the creation of different types of institutions provided by the Landscape document (MoE, 2002) in terms of staff qualifications and master's and doctor's programme enrolments, a new gauge to determine efficiency is being recommended (see Table 3). It can be expected that efficient universities would enrol at least 14% of their students for master's and doctor's programmes. The actual output in Table 2 indicates that the required 8% of master's and doctor's programme enrolments for comprehensive universities was unrealistic and should be reduced to 5%. Universities of technology should aim for the stipulated 2.5% of master's and doctor's programme enrolments.

In addition, it was expected that comprehensive universities need to have 35% of academic staff with doctoral degrees while universities of technology need to have 26% of staff with a master's or a doctor's degree. Determining what is required of a university appears to be unclear and open-ended. For the purposes of this article we assume that five years into the process of mergers, between 30% and 35% of the staff employed at a comprehensive university should have doctorates, while at least 45% to 50% of staff at a university should have doctorates. That proposed range should take into account the fact that some institutions were previously disadvantaged. In the past there was also no pressure for staff at technikons to have doctorates. So, it may be

assumed to have been unrealistic, after merging a number of technikons into UoTs, that their staff collectively would be able to meet the required 26%. A more realistic expectation would be for UoTs to have between 12% and 20% of the staff with doctorates.

Discussion

Before any conclusion may be reached it must be shown how the analysis takes into account the policy documents over the last ten years. Firstly, the National Plan (2001) focused on differentiation according to the binary divide. Secondly, recommendations of the CHE (2000) were criticised for being narrow and based on a snapshot of what had existed. When HEIs were asked to self-differentiate by providing their missions and three-year rolling plans, it was found that they tended towards homogeneity. Many institutions mimicked the elite HEIs of the past. This necessitated the ministry of education's prescribing how HEIs would be differentiated as a result of the mergers. More than 50% of the present universities constitute the elite HEIs, and remain unaffected by the mergers. The three subsequent categories of HEIs were not a natural and voluntary grouping of institutions but appear to be politically motivated, as suggested by Birnbaum, (1983) as being a factor instituting differentiation.

Generally, academics appear to resist initiatives to change systems (Van Vught, 2007) and thereby inhibit the process of differentiation. An example is those merger proposals that did not materialise. Previously disadvantaged HEIs that are now part of the new system still do not have the resources to reach the aspirations of the ministry. The output of the weighted research is dependent on the two inputs described in Table 2. It would appear that geographic location has an influence on staff qualifications at universities. The UoTs in general have been unsuccessful in meeting the required research output. The conclusion is based on what has occurred in the first five years of the development of the differentiated system of higher education in South Africa.

Conclusion

The South African higher education system has been differentiated according to programme offerings. Although policy determines overall programme differentiation there are no clear parameters to determine whether or not an HEI is capable of offering a master’s programme. The particular CHET presentation (2010) appears to be insensitive to institutional histories and their varied pasts. This is also the case when, often, inappropriate international rankings become a priority with higher education management. Table 3 below is an attempt to provide parameters for deciding whether or not an HEI should consider offering or continue offering master’s programmes.

Table 3: Possible parameters for the transition period

Suggested parameters	Universities	Comprehensive Universities	Universities of Technology
Master’s/Doctor’s degree enrolment	14%	5%	2.5%
Staff with doctorates	45 – 50%	30 – 35%	12 – 20%
Research output	0.9 – 1.25	0.6–0.8	0.3 – 0.5

Comparing Table 2 and Table 3 it can be seen that two universities (HEI 8 and 9) do not meet any of the three stipulated parameters for master’s enrollments. They also do not meet two of the three parameters for comprehensive universities and because of their programme offerings, could not have been considered for classification as universities of technology. If they are to continue as universities then it is recommended that they need to be classified as teaching universities where the focus is on effective undergraduate teaching. Their offering postgraduate programmes should be restricted to the levels of honours, postgraduate diplomas and taught or coursework master’s programmes.

An interrogation of Table 2 regarding comprehensive universities also shows that two institutions (HEIs 14 and 15) do not meet any of the parameters suggested in Table 3. Their postgraduate enrolments are 3% and 1% respectively with research outputs below what is expected of universities of technology. It is recommended that these institutions, too, aim to be teaching institutions offering only undergraduate programmes of which a larger

percentage should be diplomas. The other three comprehensive universities that offer master's programmes should have an enrolment of 5% of their respective student populations and this should be equally distributed between both coursework and research master's programmes.

Similarly, it can be seen that only two universities of technology should be allowed to offer master's programmes. It is recommended that these UoTs maintain their master's and doctor's enrolments at the stipulated 2.5%. Since their research output is still the lowest there should only be a minimal percentage of research programmes, that is, not more than 10% (of the 2.5%), offered there. The other four UoTs should place their focus on effective teaching in the domain of diplomas and advanced diplomas (DoE, 2007). The above recommendations draw on Birnbaum (1983) who states that one method of differentiation could be to examine the highest qualification an institution offers. If we adopt such a principle, then some universities would offer research programmes up to doctoral level while others would focus on undergraduate teaching with taught master's degrees being their highest offering. Then we would have comprehensive institutions that would offer up to the level of research master's degrees in limited areas of specialisation. That would depend on the area in which the most research and publications are generated. Other comprehensive institutions would become undergraduate teaching institutions.

In the category of universities of technology, there would be those who offer up to a master's programme with the provision that 10% of the research programmes offered are in the area in which their research and publications are generated, while others without a research track record would only offer programmes up to the advanced diploma level.

The above recommendations are based on the evidence that that one third of the present HEIs do not have the resources to offer research master's programmes. These institutions need to focus on the other purpose of being an HEI and achieve their effectiveness through high quality teaching in undergraduate programmes using resources at their disposal. Their mission statements should reflect that emphasis on undergraduate teaching. "The mission of an institution is the academic grid against which all evaluation of programs must be measured" Dickeson (1999, p.29). Dickeson further states that once institutions have reconciled the programmes to be offered they should "declare the relative weight it wishes to place on each function" (1999, p.35). This would prevent institutions trying to mimic each other so that, as a

South African nation, we can avoid the pitfalls of de-differentiation (Van Vught, 2007).

While our recommendations appear to be aligned with that of the CHE (2000), the difference is that in each of the three categories, provision is made for a range of qualifications. This is based on the assumption that each category has a different role to play in addressing our society's needs.

References

Birnbaum, R. 1983. *Maintaining diversity in higher education*. California: Jossey-Bass Inc., Publishers.

CHE. 2000. *Towards a new higher education landscape: meeting the equity, quality and social development imperatives of South Africa in the 21st century*. Pretoria: Council on Higher Education.

Cresswell, J.W. 2008. *Educational research: planning, conducting, and evaluating quantitative and qualitative research* (third edition). New Jersey: Pearson Education Inc.

Dargentas, M. 2006. Secondary analysis in qualitative research – utopia and perspectives. *Forum: Qualitative Social Research*, North America, 7(4). Available at: <http://www.qualitative-research.net/index.php/fqs/article/view/197/436>. Date accessed: 23 April, 2011.

Daymon, C. and Holloway, I. 2011. *Qualitative research methods in public relations and marketing communications* (second edition). Oxon: Routledge.

Department of Education. 1997. Education White Paper 3: A programme for the transformation of higher education. *Government Gazette No 18207*. Pretoria: Government Printers.

Department of Education. 2007. The higher education qualifications framework (HEQF). *Government Gazette*, Vol. 508: pp.3–29. Pretoria: Government Printers.

Dickeson, R.C. 1999. *Prioritizing academic programs and services: reallocating resources to achieve strategic balance*. San Francisco: Jossey-Bass Publishers.

Fedderke, J., De Kadt, R. and Luiz, J. 2000. 'Uneducating South Africa: the failure to address the 1910–1993 legacy.' *International Review of Education*, 46: 3/4: pp.257–281.

Glass, G.V. 1976. Primary, secondary, and meta-analysis of research. *Educational Research*, November 1976.

Johnson, R.B. and Onwuegbuzie, A. 2004. Mixed methods research: a research paradigm whose time has come. *Educational Researcher*, 33(7): pp.14–26.

Johnson, J.B., Reynolds, H.T. and Mycoff, J.D. 2008. *Political science research methods* (sixth edition). Washington: CQ Press.

Heaton, J. 1998. Secondary analysis of qualitative data. *Social Research Update*, 22.

Lewis-Back, M.S. and Bryman, A. 2004. *The Sage encyclopedia of social research methods*. Volume 3. California: SAGE Publications, Inc.

Ministry of Education. 2001. Draft national plan for higher education in South Africa. *Government Gazette*, No. 22138, Notice Number 230. Pretoria: Government Printers.

Ministry of Education 2002. *Transformation and re-structuring: A new institutional landscape for higher education*. Pretoria.

Ministry of Education 2004. *A new funding framework: how government grants are allocated to public higher education institutions*.

Tashakkori, A. and Teddlie, C. (Eds). 2003. A handbook of mixed methods research in social and behavioral research. California: SAGE Publications, Inc.

Pandor, N. 2010. Budget vote speech by the Science and Technology Minister, National Assembly. Cape Town, 20 April 2010.

Van Vught, F. 2007. Diversity and differentiation in higher education systems. CHET anniversary conference, Cape Town, 16 November 2007.

Ana Naidoo
University of Pretoria

ana.naidoo@up.ac.za

Ari Naidoo
Tshwane University of Technology

naidooa@tut.ac.za