

# CHET 2003: “WELL-FUNCTIONING” HIGHER EDUCATION INSTITUTIONS

## EVALUATING SOUTH AFRICAN HIGHER EDUCATION INSTITUTIONS

In 2003, the CHET research team formulated a model for performance measurement which was based on the methodology adopted by the National Working Group (NWG), but which did not accept all of the NWG’s sets of expected properties and benchmarks.

The CHET 2003 model took the central aspect of the NWG methodology to be its emphasis on evaluations, rather than just descriptions, of the performance of higher education institutions relative to national policy goals. The CHET 2003 judgements, however, were to be more explicitly evaluative than those of the NWG. These judgements were supposed to determine the degree to which an institution was a “well-functioning” one, rather than whether it met the “fitness-for-purpose” criteria of the NWG.

The CHET 2003 model begins with the formulation of a set of policy-derived features, indicators and benchmarks which could be used to determine to what extent the evaluation “well-functioning” may be applied to individual higher education institutions. Table 6 lists a total of 14 properties which a well-functioning South African higher education institution could be expected to have, in terms of current national policies. These properties have been grouped into five subsets:

### ACADEMIC PROGRAMMES

The first two properties which a well-functioning institution is supposed to have are a reasonable spread of academic programmes according to subject major and level of study. The indicators are full-time equivalent (FTE) student enrolments by broad field of study and the proportion of head count enrolments in postgraduate programmes.

The benchmarks for FTE student enrolments are derived from the 2001 National Plan for Higher Education. Since similar quantitative benchmarks for postgraduate programmes have not been formulated in policy documents, those set out in Table 6 were derived from empirical data for South African universities with high proportions of postgraduate enrolments.

## STUDENTS

The six properties in this subset deal with issues of student equity and student output. In terms of equity, a well-functioning institution is expected to have a student body which is representative of the total South African population, and to have educational processes which are fair. In terms of output, a well-functioning institution is expected to have reasonable undergraduate success rates and high proportions of its head count enrolment graduating each year. The indicators chosen for equity are head count enrolments by race and gender, and undergraduate success rates by race group. The output indicators are undergraduate success rates, and head count totals of graduates divided by head count enrolments. The only benchmarks which are derived directly from a policy document (in this case the 2001 National Plan) are those dealing with the expected ratios between graduates and enrolments. The others can be found in funding formula documents and in various planning directives issued by the national Department of Education.

**TABLE 6:** CHET 2003, summary of indicators and benchmarks for well-functioning institutions

EXPECTED FEATURES	INDICATORS	BENCHMARKS
A well-functioning SA university or technikon should have the following features:		
<b>ACADEMIC PROGRAMMES</b>		
<b>1.</b> A reasonable spread of academic programmes across major fields of study	<b>1.</b> FTE student enrolments by CESM category	<b>1.</b> (a) Universities: 40% SET + 15% business + 45% HUM
<b>2.</b> Reasonable spread of postgraduate programmes	<b>2.</b> Head count enrolments of students in postgraduate programmes	<b>2.</b> (a) For universities: 3% in doctoral, 12% in masters and 10% in postgraduate programmes < masters

EXPECTED FEATURES	INDICATORS	BENCHMARKS
<b>STUDENTS</b> <b>3. &amp; 4.</b> A student body representative of the total SA population	<b>3.</b> The % of students by race group <b>4.</b> The % of students by gender	<b>3.</b> At least 40% of on-campus students are African <b>4.</b> Each gender has 50% share of total enrolment
<b>5.</b> Educational processes which are fair	<b>5.</b> Undergraduate success rates in contact programmes	<b>5.</b> Undergraduate African success rates must be no more than 5 percentage points below average
<b>6.</b> Undergraduate success rates must be of an acceptable level	<b>6.</b> Undergraduate success rates in contact programmes	<b>6.</b> (a) Average of 80% for universities (b) Average of 75% for technikons
<b>7. &amp; 8.</b> High proportions of annual enrolments graduating each year	<b>7. &amp; 8.</b> Graduates as % enrolments	<b>7.</b> Ratio for undergraduate qualifications = 20% <b>8.</b> Ratio for masters and doctoral qualifications = 25%
<b>ADMINISTRATIVE AND ACADEMIC STAFF</b> <b>9. &amp; 10.</b> A professional staff body that is representative of the total SA population	<b>9.</b> % of professional staff by race group <b>10.</b> % of professional staff by gender	<b>9.</b> At least 40% of full-time academic and professional admin staff are black <b>10:</b> At least 50% are female
<b>ACADEMIC STAFF</b> <b>11.</b> A well-qualified academic staff	<b>11.</b> % of permanent academic staff with masters or doctoral qualifications	<b>11.</b> For universities: at least 40% of permanent academics with doctorates and 35% with masters For technikons: at least 15% of permanent academics with either masters or doctorates
<b>ACADEMIC STAFF</b> <b>12.</b> An academic staff complement which is active in research	<b>12.</b> Weighted publication unit and research masters & doctoral graduates (weightings): research masters & publication units = 1, doctoral graduates = 3)	<b>12.</b> For universities: 1,25 weighted units per full-time academic For technikons: 0,5 weighted units per full-time academic

EXPECTED FEATURES	INDICATORS	BENCHMARKS
<b>13.</b> Adequate numbers of staff to serve the teaching needs of students	<b>13.</b> FTE contact + distance student to FTE academic staff ratios	<b>13.</b> A ratio of most 20:1
<b>14.</b> It should be financially stable and sustainable	<b>14.</b> Ability of institution to meet its short to medium-term obligations	<b>14.</b> Positive value on the DoE's capitalisation formula

### ADMINISTRATIVE AND ACADEMIC STAFF

The properties in these two subsets deal with staff equity, with the qualifications and research activities of academic staff, and with their availability to students. A well-functioning higher education institution is expected to have a professional staff which is representative of the total South African population. It is also expected to have an academic body of staff which is well qualified and is active in research. Finally, it is expected to have adequate numbers of academic staff to meet the teaching needs of students. The indicators chosen for staff equity are head count enrolments of professional administrative and academic staff by race and gender. The indicator chosen for academic staff qualifications is the proportion of staff with either masters or doctorates, and that for research activity is the ratio between total research outputs and total permanent academic staff members. The indicator chosen for academic staff availability is the ratio between FTE enrolled students and FTE academic staff members. The benchmark for research activity is derived directly from the new government funding framework. The others are adapted versions of indicators employed by the NWG.

### FINANCES

The property selected under this heading is that a well-functioning South African higher education institution must be financially stable and financially sustainable. The indicator chosen is a complex one, based on assessments of an institution's ability to meet its short to medium-term financial commitments. The benchmark is a positive value when the Department of Education's capitalisation formula is applied to that institution.

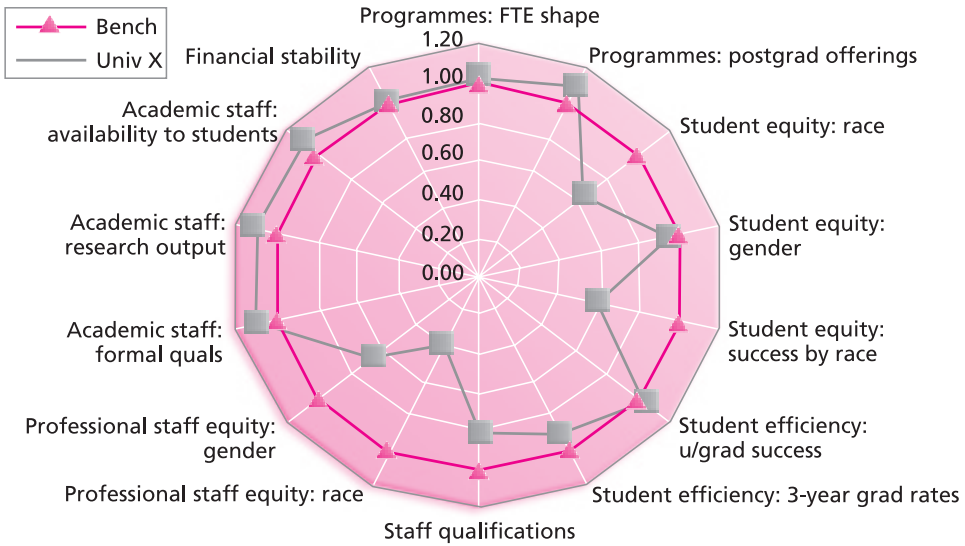
The CHET 2003 model used the same basic radar graph methodology as that of the NWG. It used HEMIS data available for the period up to 2002 to relate the ratios and proportions of individual institutions to the benchmarks set out in Table 6. In the case of each of the 14 indicators in the radar graphs, the benchmark was standardised as one, and the institutional value taken to be its ratio or proportion divided by one. Examples of the radar graphs generated under the CHET 2003 model appear in the pages which follow. As will be seen, the NWG graphs have been simplified by omitting the line representing the average values for the university system.

For illustration, the same four universities displayed in NWG graphs 24 to 27 have been chosen, to enable a comparison to be made of the NWG and the CHET 2003 evaluations. Table 7 compares these different evaluations and shows that a major change in evaluations occurs in the case of University Y under CHET 2003.

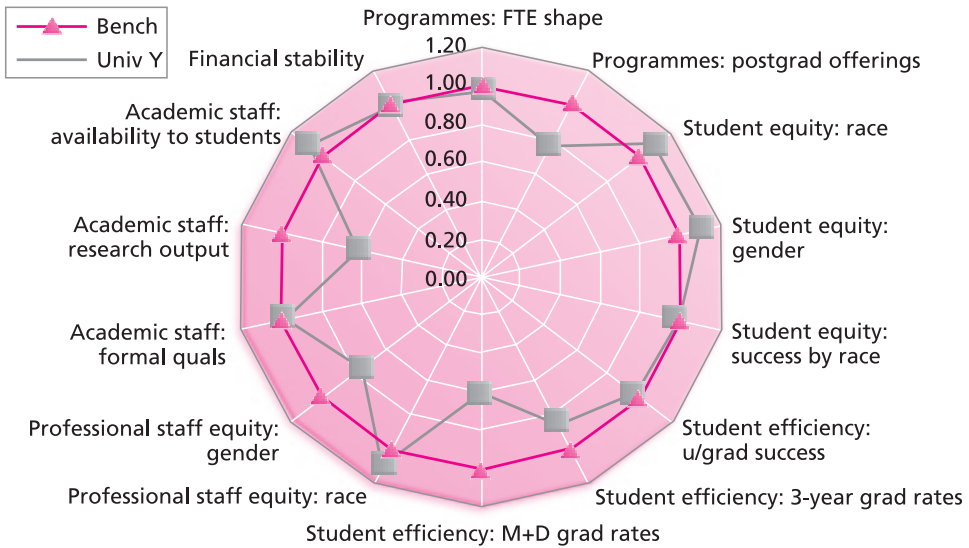
**TABLE 7:** Comparison of Institutional Radar Graphs, NWG and CHET 2003

INSTITUTION	BENCHMARKS MET		PROBLEM AREAS	
	NWG	CHET 2003	NWG	CHET 2003
University X	7 out of 12	8 out of 14	Student and staff equity; graduate throughputs; research outputs	Student and staff equity; student outputs
University Y	4 out of 12	9 out of 14	Staff equity, academic staff qualifications; graduate throughputs; research outputs	Staff equity; student outputs; staff research outputs
University Z	4 out of 12	4 out of 14	Enrolment size and shape; academic staff qualifications, research outputs; financial sustainability	Postgraduate shape; student outputs; staff research outputs; academic staff availability; financial sustainability
University W	5 out of 12	8 out of 14	Student and staff equity; graduate throughputs; research outputs	Student and staff equity; student outputs

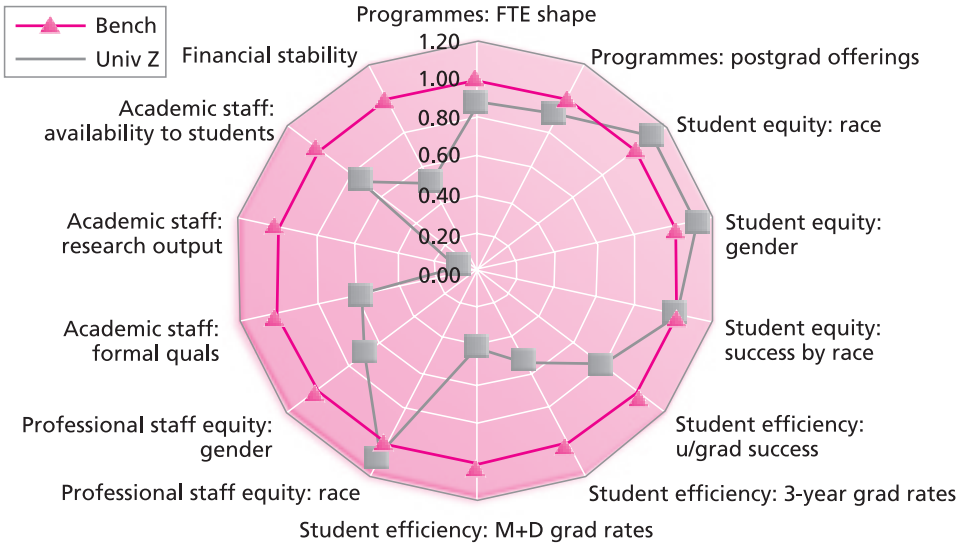
**GRAPH 28:** University X under CHET 2003



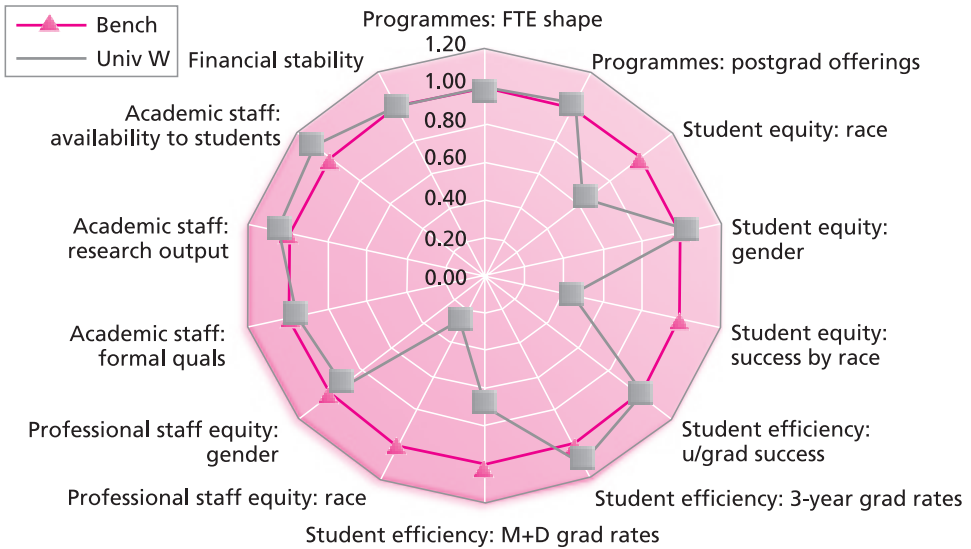
**GRAPH 29:** University Y under CHET 2003



**GRAPH 30:** University Z under CHET 2003



**GRAPH 31:** University W under CHET 2003



## OBJECTIONS TO THE CHET 2003 MODEL RAISED AT THE JANUARY 2004 SEMINAR

The CHET 2003 model of institutional evaluation was discussed at an informal seminar organised by CHET in Cape Town in January 2004. The participants at the seminar raised objections to the CHET 2003 model which were in many ways similar to those raised against the NWG model.

These objections included references to technical flaws in the indicators and to the use of the indicators forcing homogeneity on a system which, in national policy terms, is supposed to be moving towards institutional diversity. Other objections raised concerned the sole reliance on quantitative indicators, and the absence of qualitative indicators from the CHET 2003 set. Objections were also raised to the use of “snapshot” indicators, based on averages across time. Arguments were raised to the effect that any indicator set must include time-series data.

Objections other than those listed above were also raised at the January 2004 seminar, and included the following:

- ▶ No clear account has been offered of the purpose of the indicators proposed in CHET’s 2003 model. These indicators and their associated benchmarks could be interpreted as offering a methodology for the monitoring of higher education institutions rather than simply “grading” them (in the sense of placing them in some kind of value-laden ranking order). A distinction has to be drawn between the monitoring of institutional performance against sets of national goals and the grading of institutions.
- ▶ If the model is intended to evaluate institutional performance, then it cannot be based primarily on quantitative indicators and benchmarks. An evaluative process presupposes that qualitative indicators have been used.
- ▶ The notion of “well-functioning” is difficult to understand and define. The use of this term does not offer any advance on the NWG’s notion that judgements could be made of the performance of institutions and of the higher education system in terms of their “fitness-for-purpose”.
- ▶ The CHET 2003 model confuses the indicators and benchmarks which can reasonably only be applied to the system, with those that are intended for the evaluation of individual institutions. If continued use is to be made of the notion of “well-functioning”, then the properties of a well-functioning system must be defined independently of those of a well-functioning institution.



- ▶ The radar graphs used in the NWG and the CHET 2003 models are misleadingly simple. The radar graphs, for example, do not permit different weightings to be given to different properties and indicators. The graphs suggest that each indicator carries an equal weighting, and that the final assessment of an institution or a system involves a simple count of the numbers of benchmarks met and not met (as is suggested, for example, in Table 7).
- ▶ The radar graphs also suggest that average ratios and average proportions can be used as the basic units in analyses of institutions. This could generate problematic results in a higher education policy analysis.
- ▶ The use of the "benchmark" in CHET 2003 is misleading. These were not based on a standard benchmarking exercise, which might need to consider such matters as "best practice" across national higher education systems. The "benchmarks" employed in this model are in effect national policy targets. The purpose of the model would become clearer if the term "policy target" were used instead of "benchmark".